Figure in action Lesson 8

Famous Artists Painting Course Inc.

Westport, Connecticut

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EL GRECO
Christ Driving the Traders from the Temple
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The violent action of the figures in this
detail from El Greco's *Christ Driving the Traders from the Temple* shows his
skillful use of distortion to accentuate large movements of the body.
In the bending figure, the down drag from
the heavy box is emphasized by the extreme drop of the shoulders
over the elongated limbs; also by the bracing of the widely
spread ankles. The eye is forced to measure the power of this plunging
movement by a comparison with the opposite action of the
up-reaching figure. In this background figure, rib-cage and muscles
are well defined without detracting from the force of
the dark contours which link it with the foreground in one rhythmic sweep.

The figure in action

The artist cannot show a complete statement of action in a single picture because action in nature occurs over a period of *time*. A painting can depict only a *single aspect* of the total movement. This point becomes obvious when we compare action in a painting with action as shown by an animated cartoon.

When Walt Disney portrays action, he makes not one drawing but a *series* of drawings. Each of these drawings shows a momentary, progressive stage of the action. The consecutive drawings are then flashed rapidly on a screen, one after the other, and the eye of the observer is tricked into seeing the complete, continuous motion rather than the individual action sketches.

An artist who tries to portray this same action in a single sketch cannot do this. He must present only *one phase* of the complete movement, and obviously he must choose the single gesture which suggests the entire motion most convincingly. How can the artist discover which arrangement of the figure will do this most successfully?

One might suppose that the best way to find out would be to record the entire motion photographically in a series of action shots. With present-day photographic equipment it is not hard to do this.

You might assume that the most logical pose to use would be the shot taken when the action was at its very height. Surprisingly enough, however, this is not necessarily true. In most types of action there is a pause at the very climax. At the climax of a dive, for example, there is a fraction of a second when the figure hangs almost motionless in space. The instant just before or just after this point is likely to convey the total character of the action more completely.

You will find it interesting to study progressive action shots of this kind, but for several reasons they are likely to be misleading. Our eyes are not stroboscopic cameras. They are not able to "stop" the action and study it in its separate phases. When we watch a dancer, for example, what we see is the *gesture* of a total motion – *not* the separate stages of that motion.

There is another way in which the camera fools us. Because it can blink its "eye," or lens, so fast, it can "stop" an action and record every muscle in the body, every thread of the clothing, in sharp focus. The human eye cannot do this. When cars flash by on the highway, we know they are cars; but we see only shape, movement, and color. We cannot study details until the moving object has come to a halt.

If we try to paint action on the basis of a photograph, then, we are likely to make two mistakes: First, we will paint a pose which is, truly enough, a legitimate *part* of the action, but which may not be truly representative of the *total* action. Second, we are likely to get so involved in depicting detail (which the eye could not possibly see when observing the real action in nature) that we "freeze" the figure on the canvas, rather than giving it life.

For these reasons, it is a mistake to rely too heavily on the camera when studying the figure in motion. As an artist, what you are seeking to portray is not an exact optical record of the motion, but rather the psychological *impression* of motion. You can convey impression only if *you* have first been impressed. The best way to study motion, therefore, is to *watch the action performed* time and time again until you can see it with your eyes closed. You should then make dozens of sketches of the motion, comparing these sketches with the original motion, until you have hit upon the one arrangement of the body which seems to convey the total gesture with the greatest force. As mentioned above, this will usually portray the instant just before or just after the climax of the motion.

Your sketchbook should become your constant companion wherever you may be. In it, you should make drawings of every gesture and attitude you see – not finished drawings, but "picture notes." A girl leaning over a desk, a man dozing in a corner of the bus, a child squirming around on a restaurant chair—these are typical of the models who are everywhere at hand for the looking. Rapid sketches of this kind will develop your power of observation and you will soon learn how to get down the action

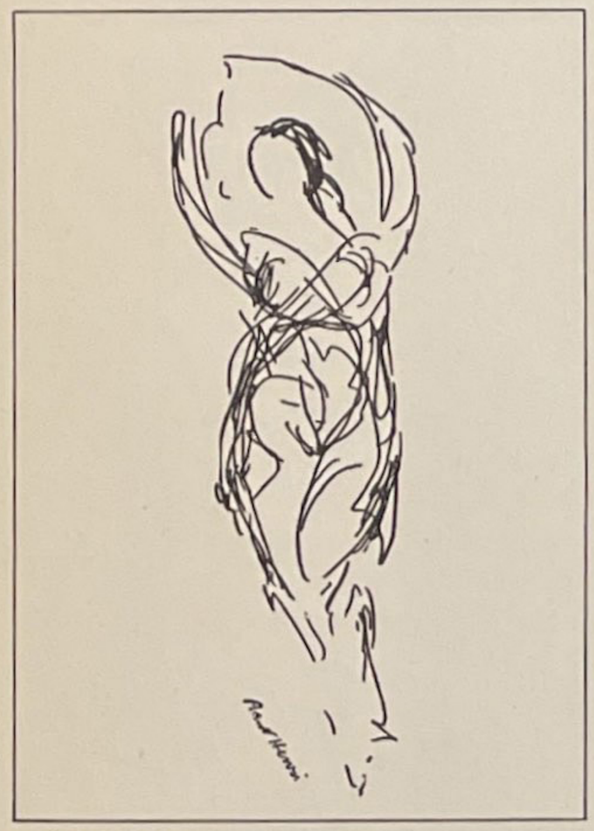
Spirit and flesh

Photos courtesy of Kamin Dance Publishers

AUGUSTE RODIN

ABRAHAM WALKOWITZ

MAURICE DENIS



ROBERT HENRI

JOSÉ CLARA

VAN DEERING PERRINE

As opposed to the highly formalized patterns of the classical ballet, Isadora Duncan emphasized movements natural to the body — walking, running, skipping, leaping, and the like. These simple movements she infused with such spiritual communication that a whole generation of artists and art lovers turned to her with the fervor of religious converts. Isadora, the dancer, is reflected in the rapid sketches these different artists prepared. Exact likeness was unimportant here. What these artists tried to capture was the essential line of the gesture, the swift movement of the limbs, the fall of the drapery around the body. They have thus managed to convey some of the *spiritual* inspiration behind the dance, which is infinitely more significant than merely presenting the physical body frozen in action poses.

and spirit of your model in a few quick lines. Movement and expression are the basic forces of picture making. You can best develop your sensitivity to these qualities through the discipline of *observing* with your pencil as well as through your mind's eye.

Remember, however, that an artist is concerned with two kinds of "motion." There is, first, the physical gesture of the model in action. Quite apart from this is the second kind of motion — *the rhythmic pattern which the artist creates in his drawing of the moving figure.*

The artist has the second kind of motion in mind from the instant he begins to study his model. Suppose, for example, that he wishes to show two figures running at breathless speed. He can view the figures from front, back, or either side. Whatever the position he chooses, he will be portraying the same motion, or even the same instant of motion.

It is obvious, however, that if he presents the figures from front or back, much of the sense of speed will be lost. When seen from these vantage points, the *pattern* set up by the moving figures is not much more exciting than the pattern of the same figures standing still.

But when he looks at these figures from the side, the idea of running becomes obvious. Now the arrangement of forms and lines suggests a violent pinwheel which sums up the action. Having chosen his viewpoint because of the visual possibilities it offers, the artist then proceeds to clarify the action into a design. He rearranges individual forms, changing their placement slightly or much until they create a powerful organization. He may even introduce exaggerations and distortions, if he feels that handling the forms in this way will increase the sensation of the action.

At the same time, he arranges every other element in the painting to echo and reinforce the rhythmic lines set up in the figures. The artist has received a visual and emotional *impression* of "figures running." His purpose in making a painting of figures running is *not* to provide a photographic record of the action, but rather to convey his *impression* so forcefully and directly that other people will see and enjoy what he felt.

Photographs of violent action, oddly enough, are likely to appear static. The shutter-bug's proud announcement, "I've got a lens and shutter fast enough to "freeze" any action," is usually all too true. He *does* freeze the action; the figure in his print never moves from its transfixed, contorted position. But by organizing the same pose in a rhythmic pattern, altering it slightly with a deft touch here, a magic adjustment there, the artist achieves a sense of motion in the figure which it can never lose. The artist's design is calculated to set up a movement *in the eye of the observer;* and the observer then seems to feel that movement is a quality of the figure itself.

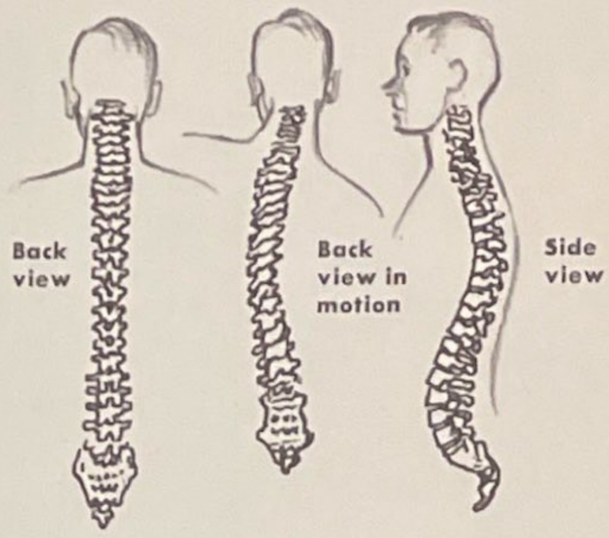
Therefore, in learning how to draw the figure in action you should devote your attention to two different aspects of the problem. First, you should study the living, moving model, and practice setting down the main gesture of the action as convincingly as possible. Second, you should study the great drawings and paintings of the master artists, and discover how they organized action to create powerful visual patterns.

Remember that the artist begins his work where the camera leaves off. Nature is never art. Nature provides the raw material of art, and that is what the camera records. But only the taste and the imagination of the artist can take this raw material and organize it into a living, breathing, moving entity with an independent rhythm of its own. The artist is a creator; and it is only when he can create a new world upon the surface of his canvas, infused with his own life and spirit, that he is justified in calling himself an artist.

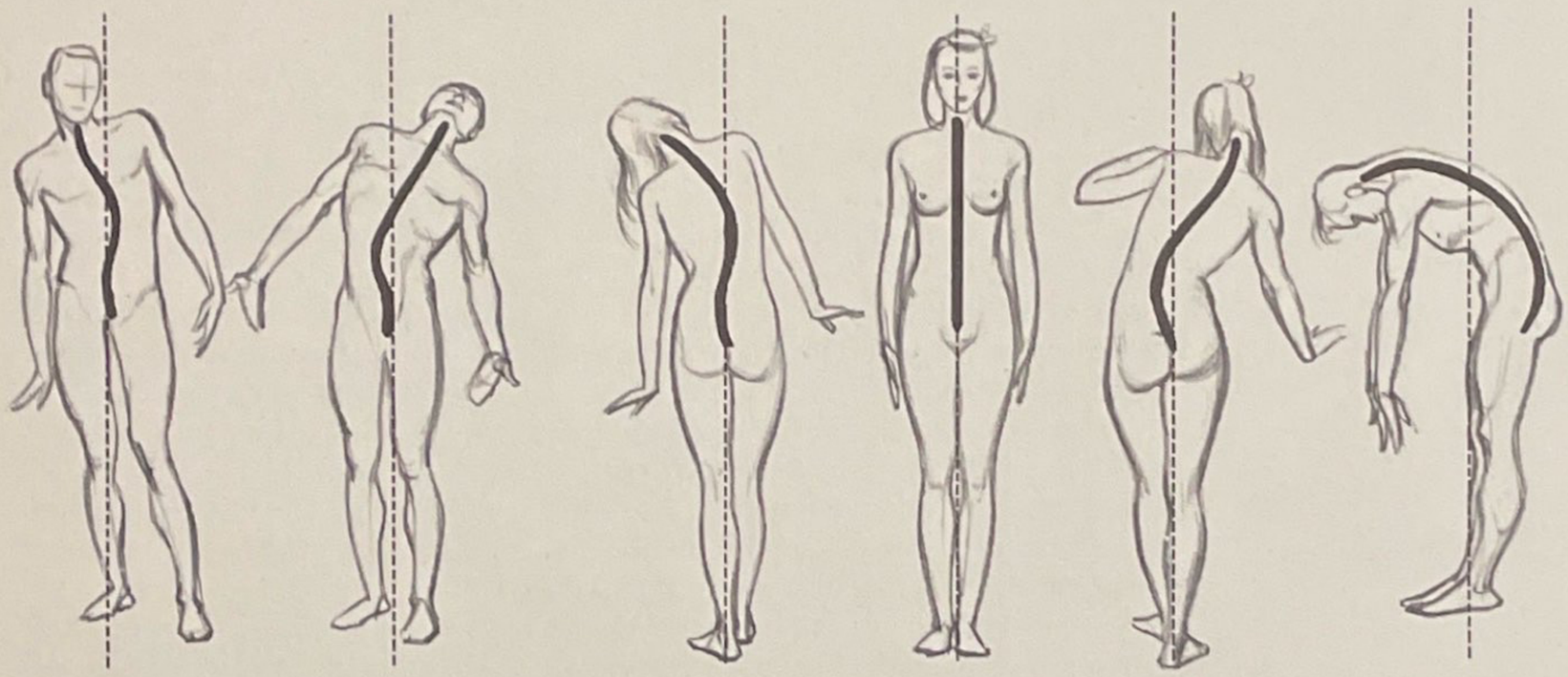
Movement of the spine and body

For the action of the body, look for and study the curve of the spinal column. The slant of the shoulders, the hips, the rotation and turning of the body are due to the twisting of the vertabrae which make up the spinal column. Each vertabrae of the spine moves a little and the whole movement in the entire spinal column is the result of the aggregate of all these many little movements. Always think of the spinal column as the connecting rod between the upper and lower portions of the torso – as well as the head which, of course, is at the upper tip of the spine.

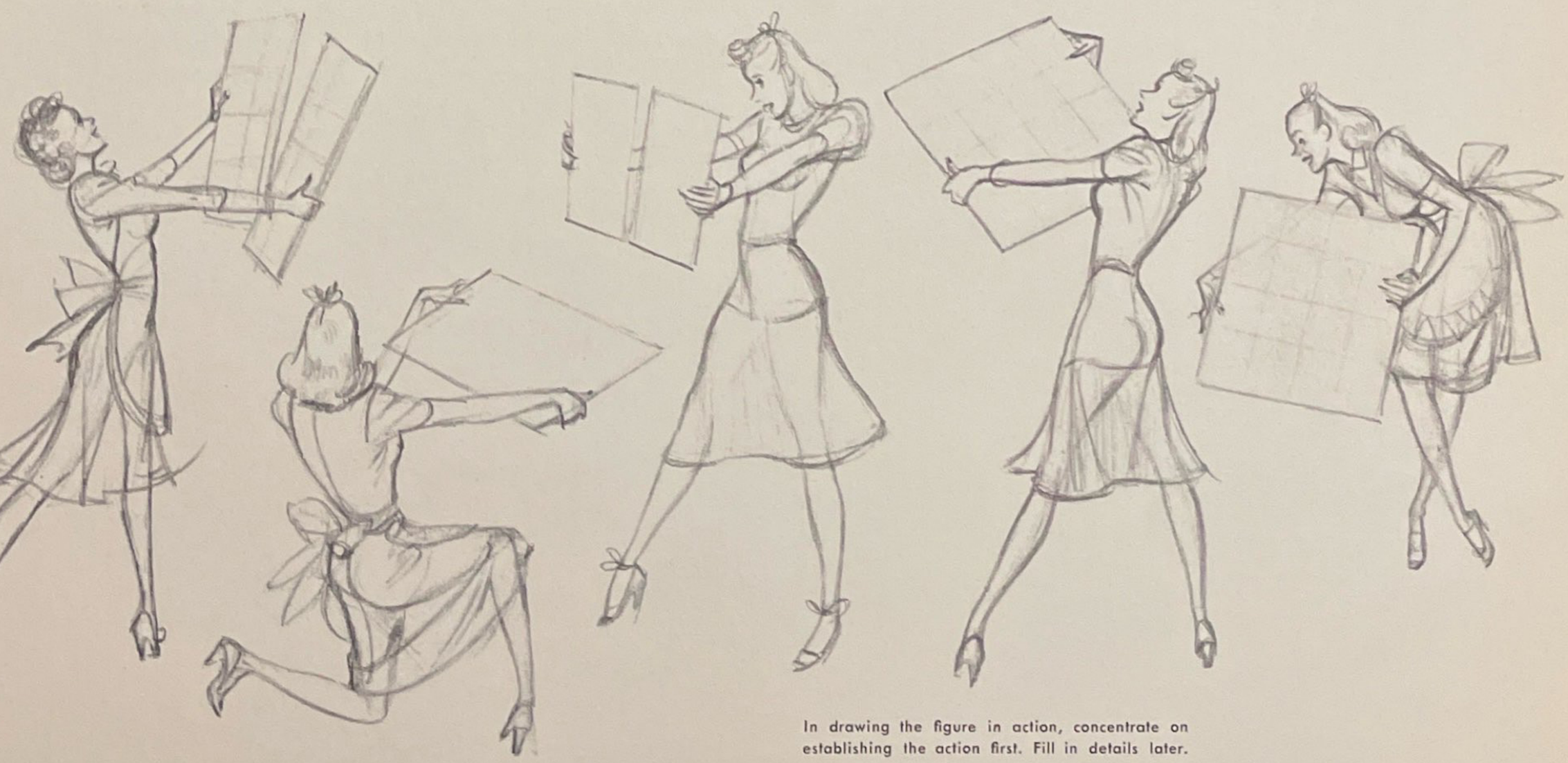
If you thoroughly learn the function and movement of the spinal column, it will add greatly to your ability in drawing the figure in action from every angle.



The spinal column is made up of many vertebrae, each of which moves a little making up the entire movement of the spine.

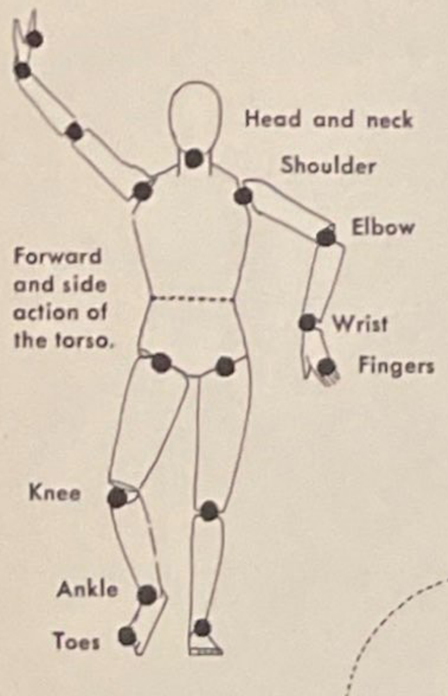


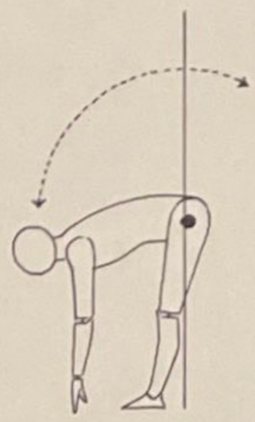
Note the dotted vertical line of balance based on the foot on which the weight is placed.

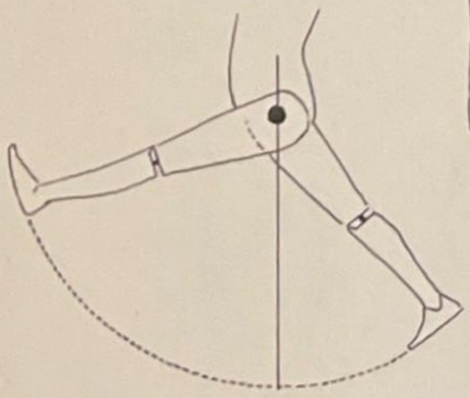


In drawing the figure in action, concentrate on establishing the action first. Fill in details later.

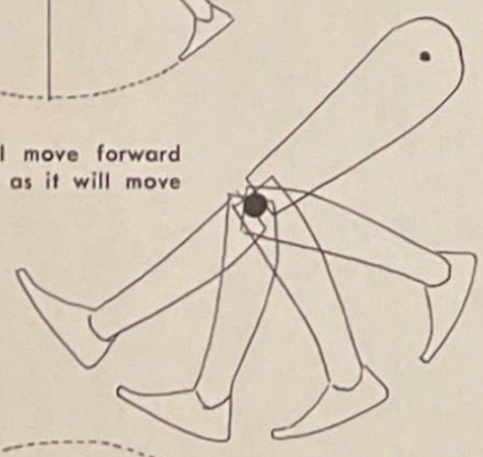
Figure in action



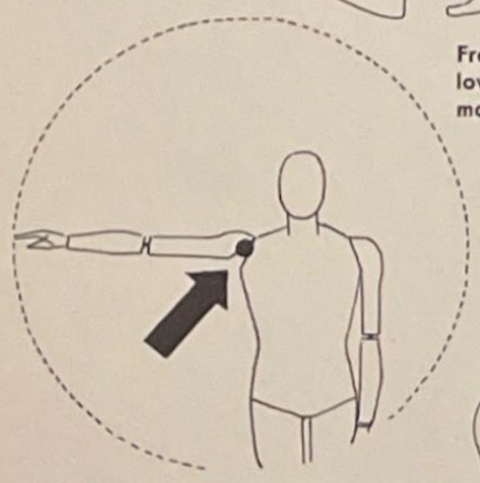




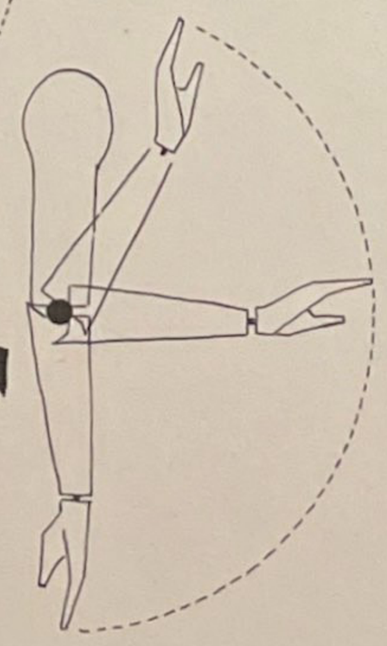
The leg will move forward twice as far as it will move backward.



From the knee the lower leg only moves backward.



From the socket joint at the shoulder the arm has a wide range of motion.



The elbow gives the forearm a full arc of forward motion but none backward.

Movable parts

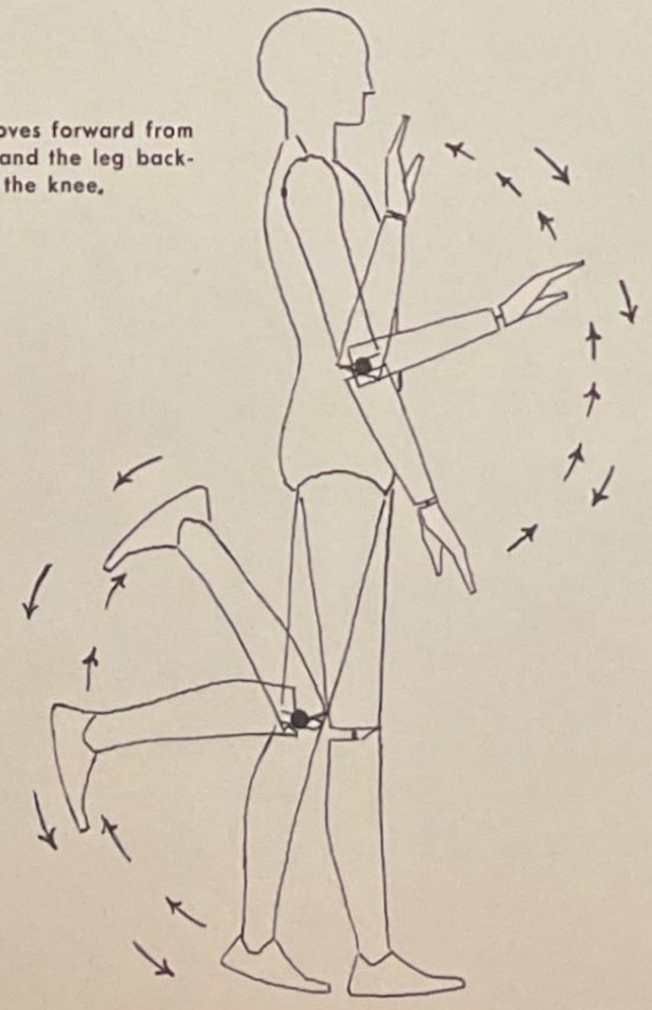
If we are to give more expression to the human figure in motion, we must investigate the movable parts more closely than we did in Lesson 6. The eight most important points of motion are head and neck, center of torso, hips, knees, feet, shoulders, elbows and wrists. If you move your own head from side to side then up and down, you will know about how far it can be moved in any direction as well as we can explain it to you here.

If, with outstretched arms, you can touch the floor at your toes, you have about the limit of the forward motion of the torso. This is possible from *two* points, partly from the curve of the backbone and partly from the socket joint at the hips. The side motion of the torso is only about half as much as the forward motion while the back motion is less than either the forward or side motion. Demonstrate this by standing and trying it.

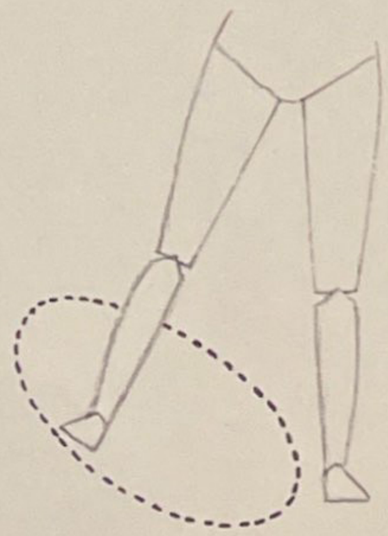
The legs will move forward without strain from the hip socket about twice as far as they will move back. The extent of the side motion of the leg is limited to about the distance it will bend back, as you can easily demonstrate. Besides the hip motion, the leg has another movement, up and down, which occurs at the knee. However, from the knee the lower leg can only move backward, never forward.

The most restricted point of motion occurs at the ankle where there is a limited up and down motion. The three leg joints with their accompanying muscle constructions cushion the weight of the body in walking and jumping.

The arms are similar to the legs inasmuch as they also have three major joints. However, unlike the legs, the arm is more versatile. From the socket joint at the shoulder, the arm has almost unlimited directional motion. The elbow is similar to the knee except that the joint allows the action of the arm to be the opposite of that of the leg. The arm moves forward from the elbow while the leg moves back from the knee. At the elbow, as compared to the knee, it is as if your knee joint were at the back. The movable joint at the wrist has much more latitude of motion than the ankle although the direction of the motions is the same. One characteristic of the arm is that it can be turned completely around. Stretch your arm out, try it and see for yourself.



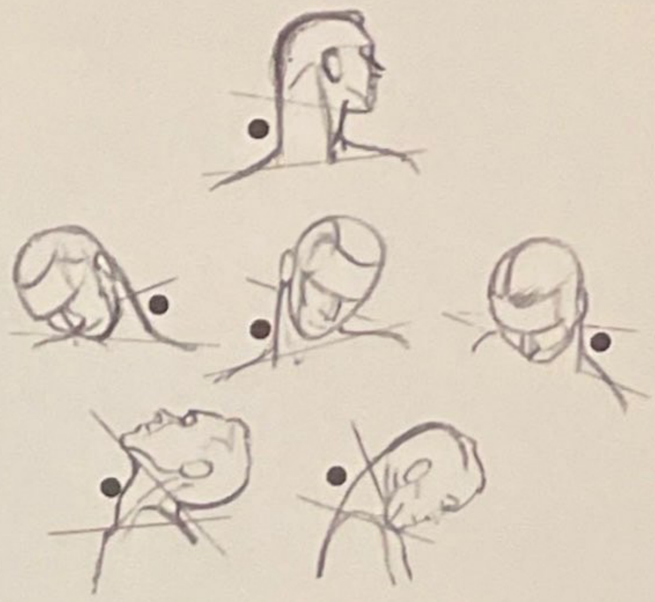
The arm moves forward from the elbow and the leg backward from the knee.



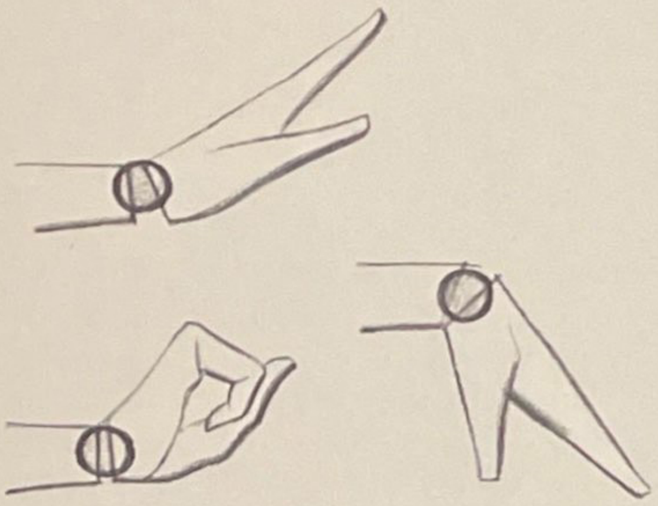
Lesson **8** Famous Artists Painting Course

Figure in action

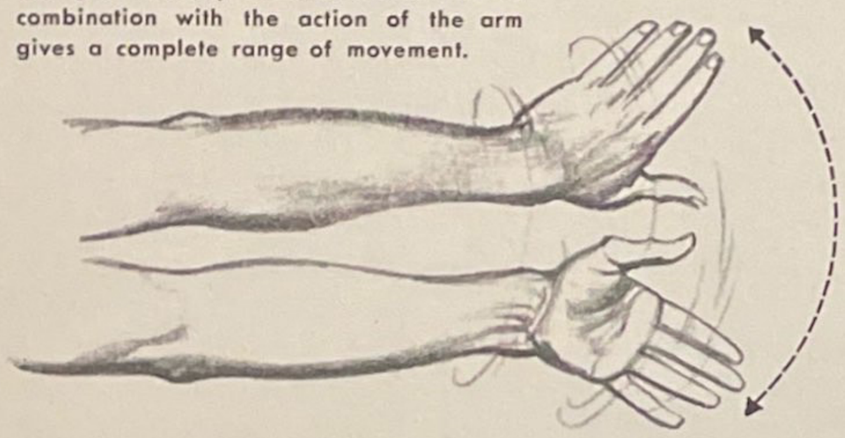
If you could think of all of these motions at once you can easily realize that within the basic human form there are innumerable combinations of motions. Try sketching as many as you can, such as we show here, without violating the limit of the action or destroying the forms. Now you can really have your figure do things for you. In all of your practice keep in mind the *basic proportions* of the *normal* human figure as we have taught them to you. Move the parts but be sure to keep the relationship of one part to the other. Draw the "other side" . . . the human form must appear as a solid form with depth no matter in what attitude or action it is pictured.



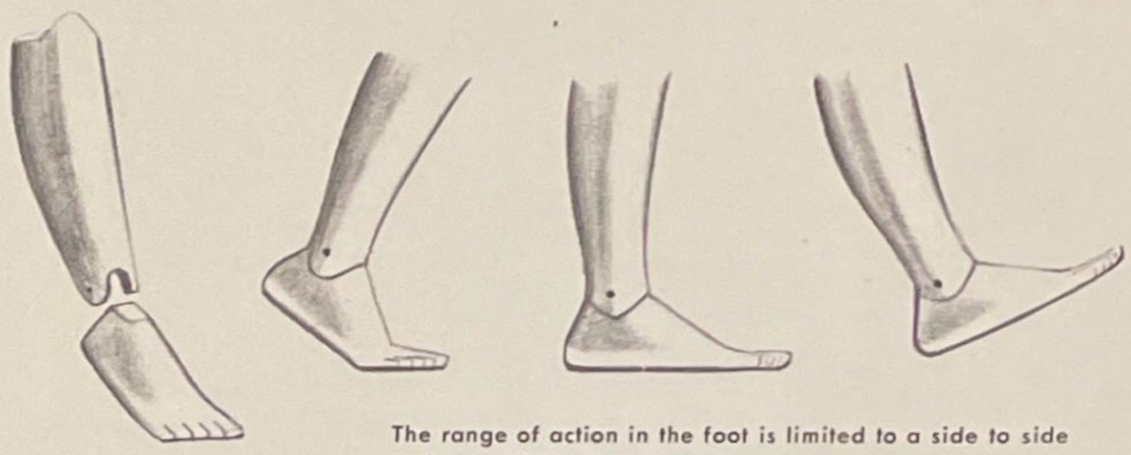
There is a great range of movement in the neck.



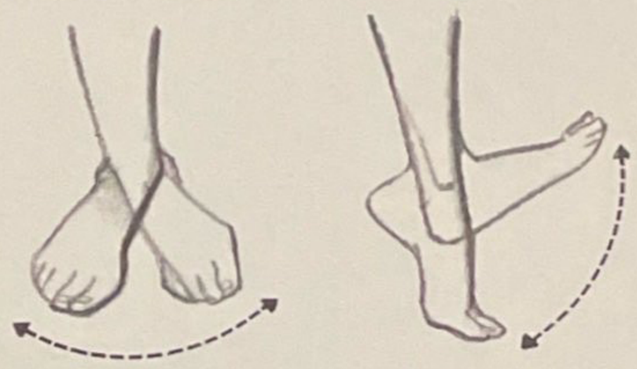
The great variety of wrist movements in combination with the action of the arm gives a complete range of movement.



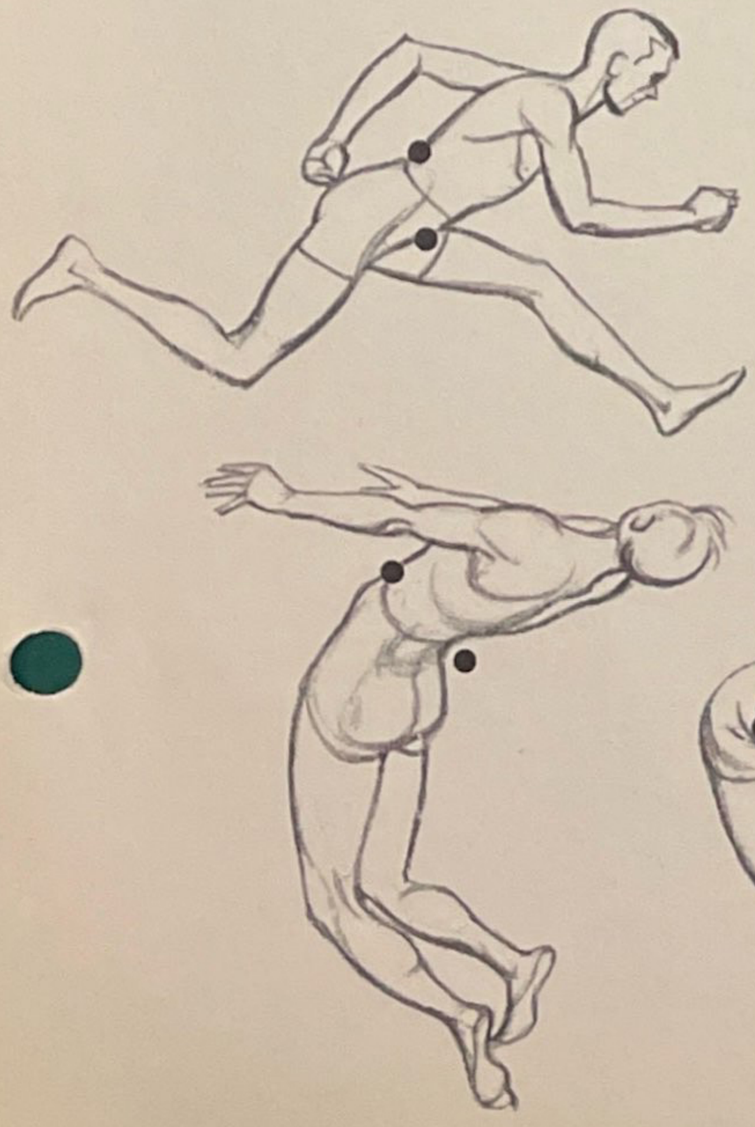
The hand in conjunction with the arm can turn completely around.

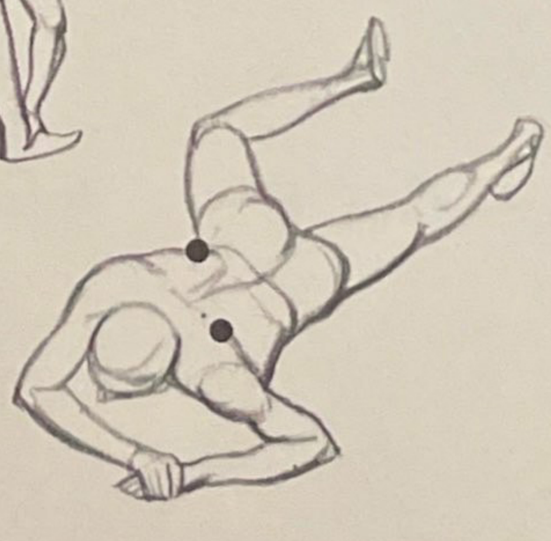


The range of action in the foot is limited to a side to side and up and down movement.



The foot moves from side to side—and up and down.





The wide range of movement of the body's parts plus the range of movement of the torso itself gives the entire body an infinite variety and degree of action.

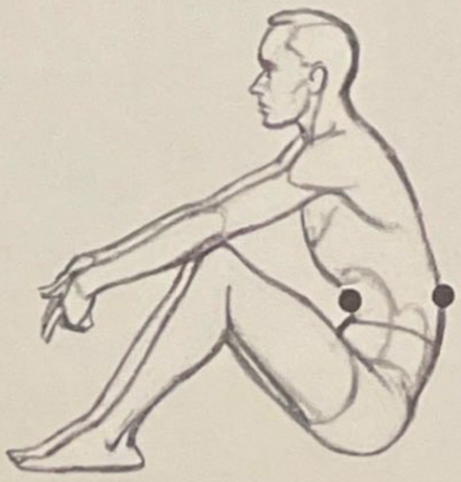
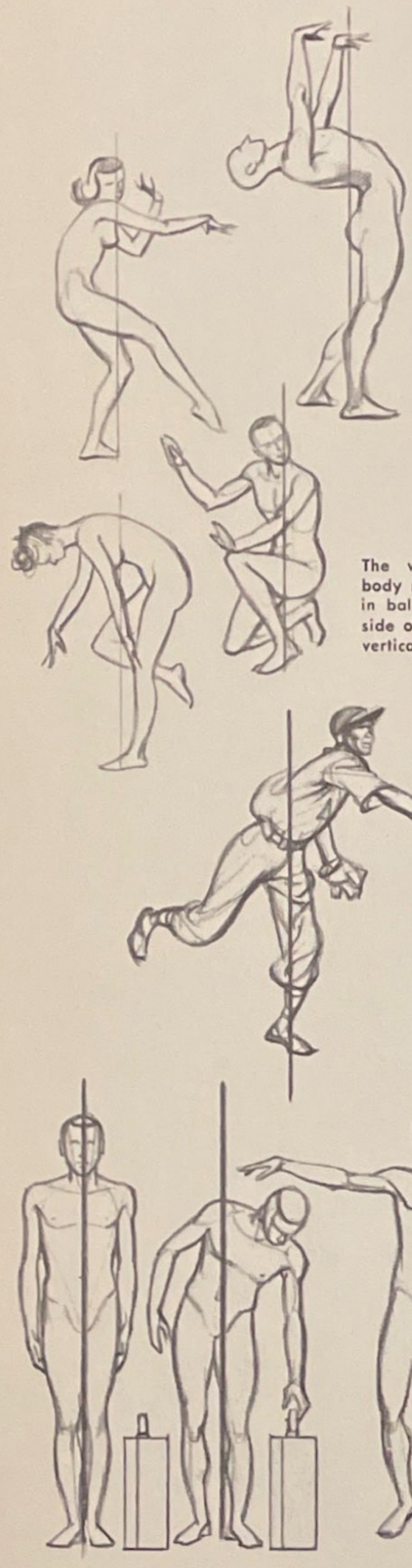


Figure in action



The weight of the body must always be in balance on either side of an imaginary vertical line.

In drawing the figure, remember that these vertical lines are only imaginary. When sketching in a figure, the line should be sketched in **very lightly.** This also applies to **all other guide lines.**

Balance

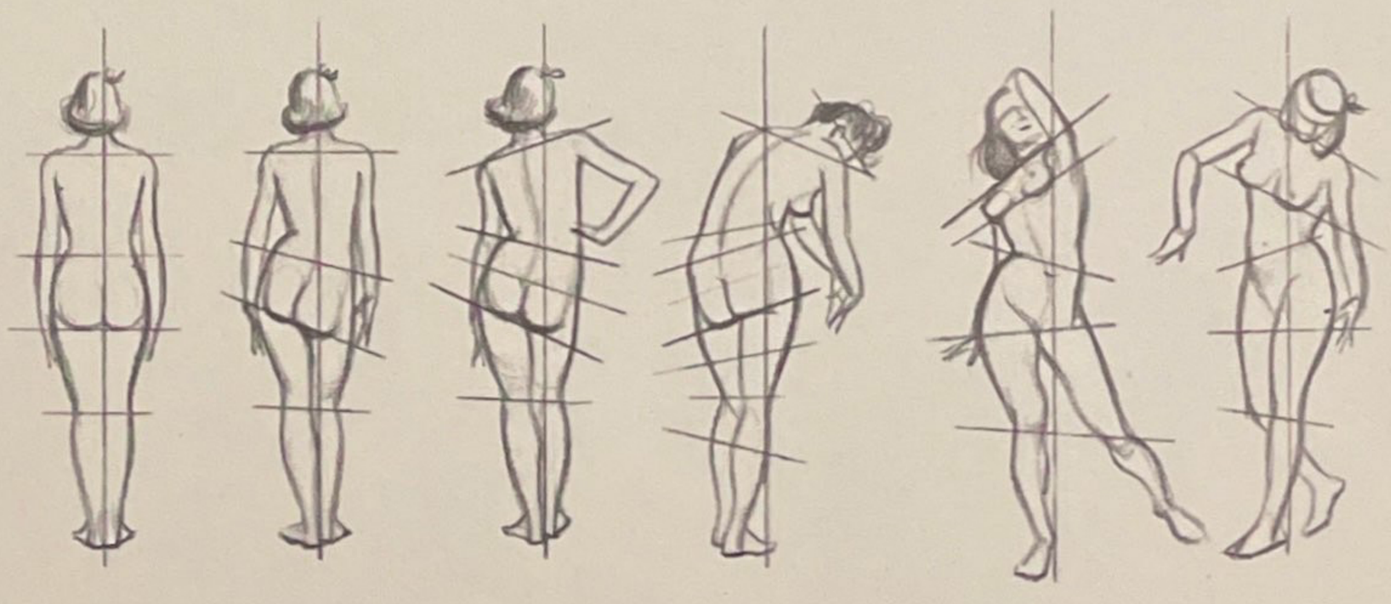
Balance is the ability of the human being to stand erect and to keep from falling, when in motion as well as when standing still. This balance results from the delicate distribution of his weight. When the figure is in motion and does not appear to be supported by some visible means, it must, to the observer, *appear to be in balance.* It is because of the fact that when the figure is in motion the state of balance is sometimes fleeting that the artist must always avoid, when drawing an action pose, the fault of having his figures appear unstable and out of balance. Pictures in which the figures are out of balance are always disturbing and anything but convincing.

Balance in drawing the figure is begun by drawing a light, vertical line as a guide on which the figure will be constructed. This line is just as important when the figure is to be drawn in an attitude other than standing, such as running, walking, bending, crouching, etc. When studying the figure in balance, keep in mind what you have learned in the construction of the basic form figure.

Whatever action or position the figure may assume, its outstanding characteristic to the observer will be its symmetry. In drawing the figure in action you must always draw in corresponding parts at the same time, for example: the shoulders, the hips and the knees – and in the female figure the breasts should be included in these first lines of direction. All these points should be located in the first few lines of laying in the action. You cannot ignore one side of the figure while you draw the other side and still produce a balanced action.

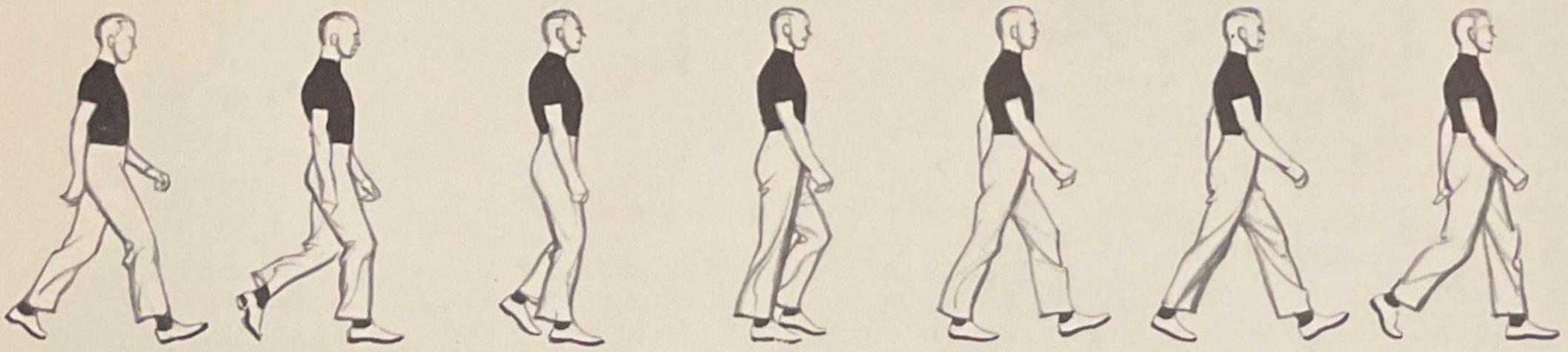
When standing erect, the weight of the figure is distributed equally on either side of a *vertical line* which passes from the pit of the neck to the middle of the instep of the foot which supports the body. Any motion of the body or change from this first position will automatically displace the pit of the neck from this vertical line, so you must *remember* that the weight of the body must *always* be balanced over the foot or feet or between the feet that rest on the ground and support this weight.

In bending to one side, as in the action of lifting a heavy suitcase or reaching, you will find that you naturally extend your opposite arm to preserve your balance – and you will usually raise the heel of the opposite foot from the ground as well. This shows that you must place a sufficient weight on the opposite side to *preserve your balance* – this applies to every attitude and action. In bending, the body *lengthens* on one side as much as it *shortens* on the other – but the length of the central line does not change.

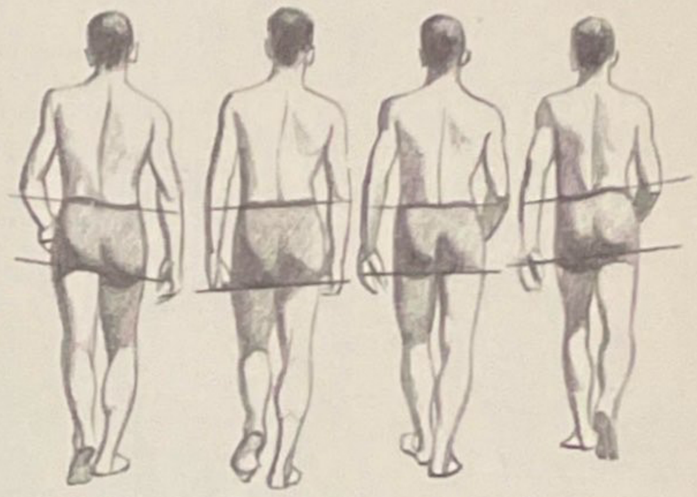


The shift of weight to one foot causes the other leg to relax, with a dropping down of the hip and an effect of stretch on that side. On the side to which the weight has been shifted, the hip has been pushed up and the side folded and shortened. This movement causes a bend in the body, indicated by the position of the spinal column and the direction of the shoulders.

Figure in action



A complete stride performed at a normal walking pace. Study the position of the arms in relation to the legs at every position, as the walker proceeds across the page.



Note the direction and movement of the hips and buttocks as the weight shifts from one foot to the other in a normal stride.

Walking and running

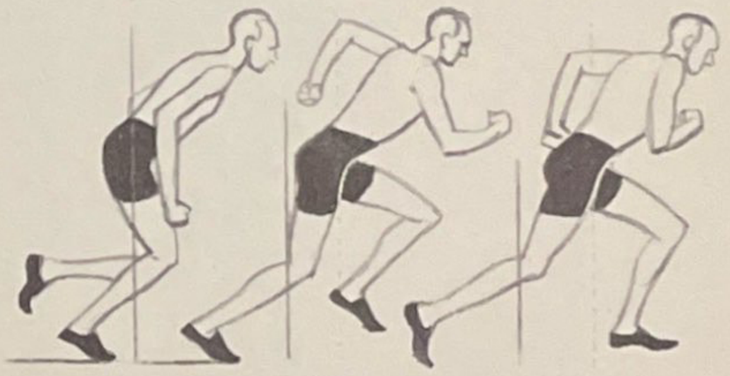
In walking, the action of the body alternately shifts its weight first to one limb and then to the other, with the center of gravity passing over the foot on the ground. In progressing, the leg is extended slightly in advance of the body – the heel touching the ground first, quickly followed by the toes – so with the foot resting on the ground, the heel of the other foot is raised with the knee bending slightly as the leg swings forward past the other. One foot now bears the entire weight of the body while the other swings onward and rests on the ground to also take and support the weight of the body – during this process the body is always passing vertically over the supporting foot. With each raising of the foot, an outward thrust is given, and the weight of the body is shifted to the other foot. The unconscious effort to balance the movement of the limbs in walking causes the arms to swing alternately in opposite directions to the legs so that *when the right leg swings from back to front – the left arm swings from front to back* – with the same action applying to the other two limbs.

In walking fast, a longer stride, accompanied by a more pronounced alternate swinging of the arms, distinguishes it from an ordinary normal walk. It should be remembered that when you draw this action, the knees should be bent to avoid an appearance of stiffness.

When running, the body should always be shown *ahead* of the center of gravity – the faster the figure runs – the more the body should appear to lean forward.

Some of the most important functions of the figure in motion are the walking attitudes – study these thoroughly as well as those of the people around you – make many sketches of these actions. Unless these *fundamental actions* are correctly drawn, they will never look right.

In walking fast, there is a longer stride and a more pronounced alternate swing of the arms.



The faster the running position, the farther forward the body is thrust in front of the imaginary line of balance.

You learn to draw — by drawing

The smooth running stride of an athlete—note the apparent "feeling" of balance in every stage of the running action.

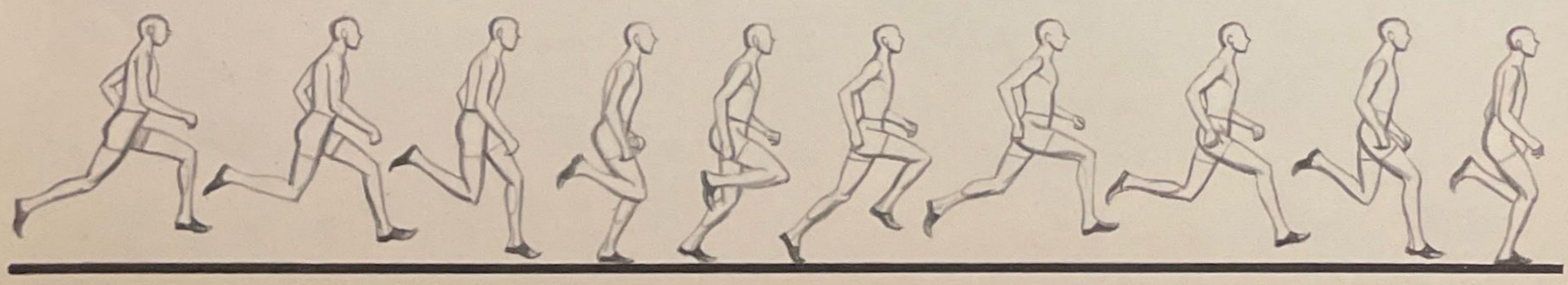
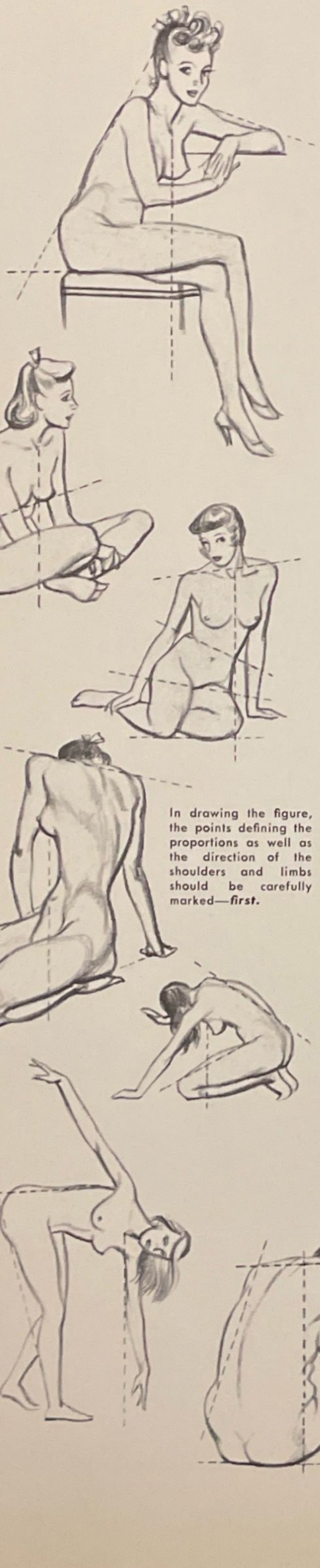


Figure in action



In drawing the figure, the points defining the proportions as well as the direction of the shoulders and limbs should be carefully marked—*first.*

Sitting — bending — kneeling

The seated figure can express a variety of attitudes; it can suggest fatigue, dejection, aggressiveness, aloofness, boredom, alertness. Each action must be studied and drawn differently. Sit down in front of a mirror and act out the different positions and emotions. See how simple it is to dramatize them all. In drawing the seated figure, it is important to understand the shifting of the weight from the feet to the thighs and buttocks, the back, hands and elbows. The weight, when sitting is taken by the thighs and buttocks — both flatten considerably in a sitting position, especially in the female. Great care must be taken to be certain that the head is in the proper position over the body. Remember that while the seated figure is usually supported and is not as subject to the laws of gravity as is the upright figure, your central line of balance and distribution of the weight is just as important. This must be considered thoroughly, or as in the case of the upright figure, your seated figure will not be convincing.

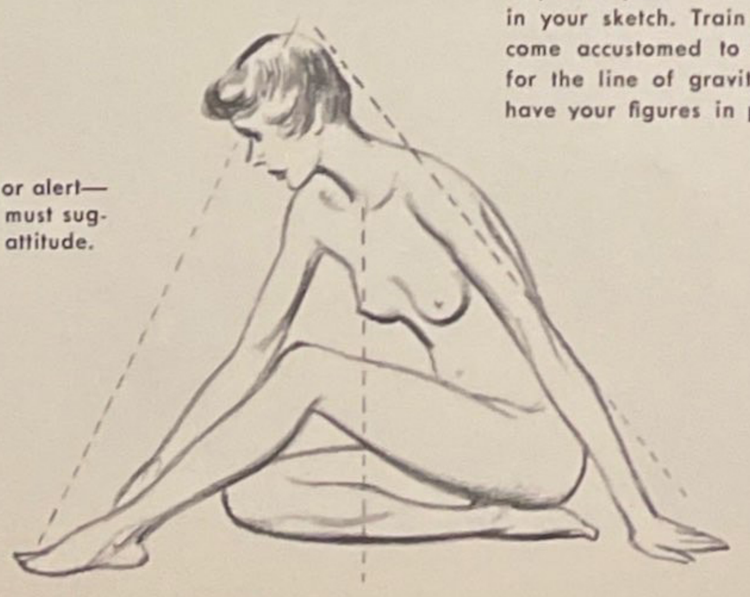
Nothing is quite so uninteresting as a figure "just sitting" — feet close together, the arms resting alike on the arms of the chair and the face straight ahead. To be interesting, the seated figure must suggest a mood and attitude, whether relaxed or alert. Care must be taken in sitting postures to think out the perspective and foreshortening. Study carefully the forms of the body as they either recede or come toward you. Study carefully the contours arranged in front of each other. If you don't, an arm will look short or a thigh will not recede properly and the legs will fail to look right in perspective.

In bending, kneeling or in any other action the same rule must always apply. "Just bending" is dull and uninteresting; the body must have balance and rhythm. There must be a reason for bending or kneeling — for that matter, every movement of the human form is motivated by a specific reason.

Study the drawings on these pages, paying special attention to the points of strain as well as the degree of movement of the parts of the body in the actions. Make many sketches of members of your family and friends in these various poses. Work for the actions rather than the details — always keeping in mind the imaginary line of balance.

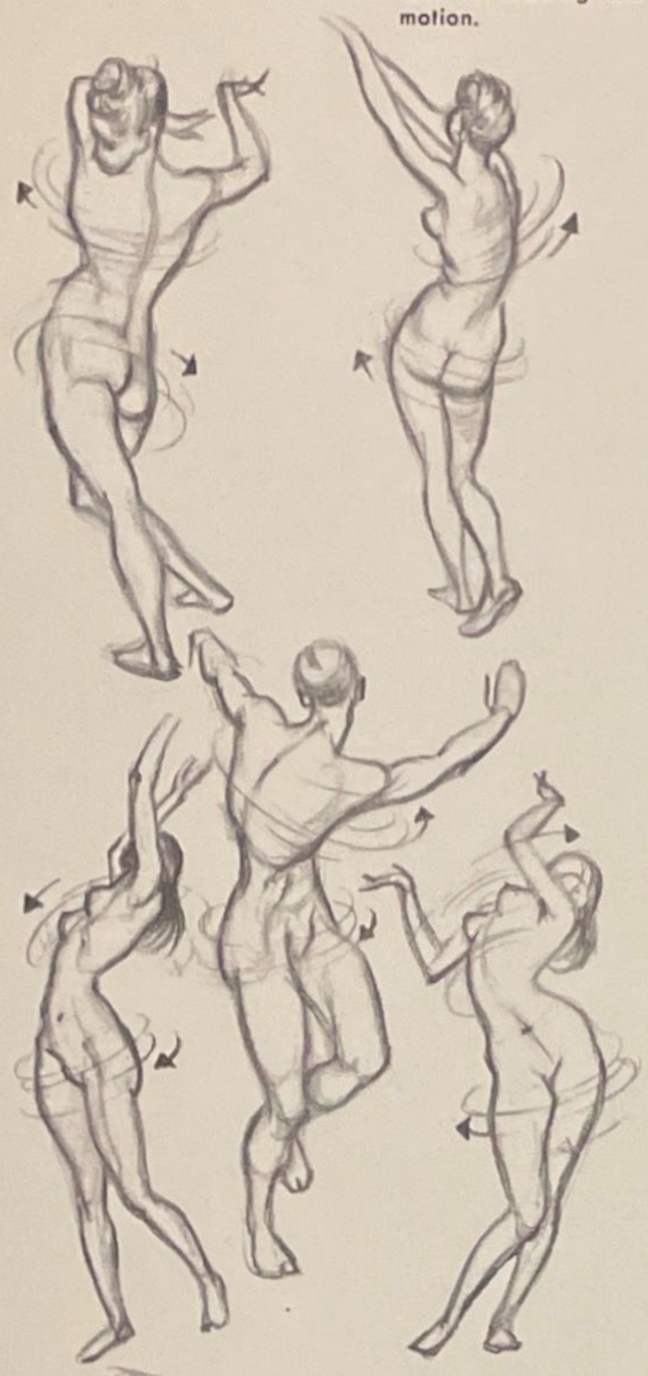
You learn to draw — by drawing

Whether relaxed or alert—the seated figure must suggest a mood or attitude.



Note that all the figures on this page seem to be in balance. This must always be your watchword in laying in your sketch. Train yourself to become accustomed to always looking for the line of gravity and you will have your figures in proper balance.

The feeling of rhythm is important in drawing the figure in motion.



Twisting and turning

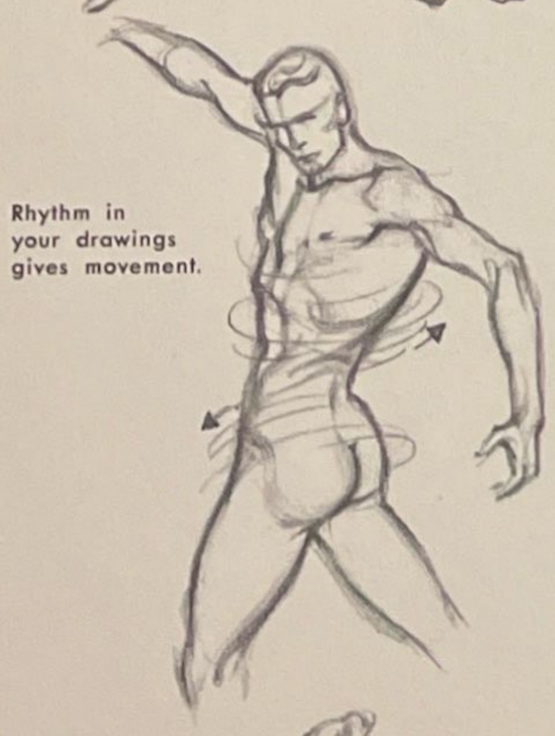
In drawing the human figure twisting and turning, you must consider the torso in its masses, made up of the head, chest and pelvis held together by the spinal column.

As these forms twist and turn, the spaces between them become long, short or spiral. You might think of the torso in motion as an accordion being played. One side is the active side. It is the result of forcing the forms toward each other, compressing them and bringing them together much like the pleats of an accordion. The opposite and inflated side describes the longer "sweeping" curves.

A definite feeling of "movement" must be contained in every action pose – much like a cartoonist who can add greatly to the sense of movement by drawing direction lines back of a moving hand or foot.

For the convincing effect on the observer of the figure turning and twisting, it is important to "feel" the full range of movement in your drawing. The observer must be made to sense the movement that is in progress. In this kind of drawing, your best method is to watch people in action and observe their gestures. You must make quick mental notes and then record them with a pencil, trying to capture on paper just those lines and forms that catch the motion or gesture. With your earlier studies of anatomy and the figure *thoroughly absorbed,* you should find that you are now able to make these action drawings convincing and real. Here, as we have said many times before, lies the great value of your pocket sketchbook – and our slogan: See – Observe – Remember.

Rhythm in your drawings gives movement.



Note the sweep of the actions as indicated by the arrows. The parts of the body can move independently—or in opposite directions—or in the same direction with one part moving faster than the other.

Figure in action

By drawing intermittent cross sections and connecting them —you can foreshorten any form.

Foreshortening

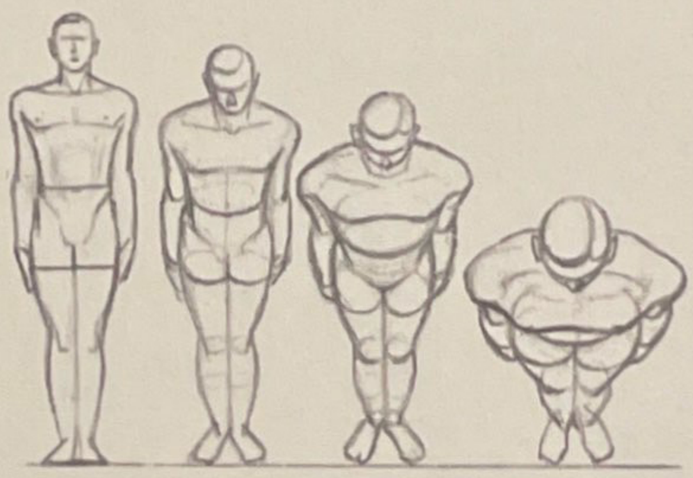
In drawing the figure in motion, foreshortening and perspective should be considered together. Perspective refers to the effect of distance upon the appearance of objects and planes. Foreshortening, as it is known to artists, is the use of perspective in drawing a figure so that the parts nearest you are made to appear larger in proportion to those farther away.

In drawing the figure in outline with no shading, foreshortening requires great skill in order that the parts are represented correctly in true perspective. This is especially difficult in the human figure with its irregular shape and the curved lines in its formation. Much skill and study is necessary to master this problem.

Anything is said to be foreshortened when we look along it or view it from a point where we do not see its full length.

If the human figure were composed of straight lines and angles, we might draw it by the general rules of perspective, but because it is made up of many curves flowing into one another, practice and study become necessary in making a foreshortened or perspective drawing of a human figure lying down with either the head or feet toward the artist, an arm and hand reaching out directly at you; or many other similar instances.

The problem of foreshortening is not involved when drawing flat shapes in certain positions. When looking at a circle, rectangle or any other flat symmetrical form or shape, placed at right angles with the line of vision, its shape will always appear the same, whether five feet away or five hundred; the only difference will be in its size. But practically every drawing of the human figure – and especially when in motion – involves some problem of foreshortening.



If a man fell forward toward you, this is what you would see as his head and shoulders came closer than the rest of his body and limbs.

As the arm moves toward your eye, note how the contours—indicated by imaginary circles—pass over one another—the more directly it moves toward you, the wider the circle is.

Imaginary circles of different degree show how the form and perspective are retained in the figure and limbs whether coming directly at you or going away. Note the feeling of solidity and roundness when the figure is foreshortened expertly.

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MICHELANGELO. Archers Shooting

This page of sketches demonstrates clearly why Michelangelo is considered one of the greatest masters of figure drawing. The artist's authority stems partly from his detailed knowledge of anatomy, but even more from his penetrating observation of action. Here he has captured the *gesture* of shooting so perfectly that the archers seem to fly after the departing arrows.

Courtesy of the Metropolitan Museum of Art

DAUMIER. A Clown

Here Daumier has drawn action *as we see it*, rather than as we *think* we see it. There is no detail, no freezing of the forms within hard edges. The excited gesticulation of the clown, the wild beating of the drum, are suggested by nervous draftsmanship in a kind of multiple-image technique related to Futurism and the modern stroboscopic camera.

GOYA. The Duel

With a few strokes of the brush Goya has stated this action as convincingly as it could be shown in a finished painting. Study the buttressed power of the figure at the left as compared with the yielding, relaxed figure at the right, caught in the instant before collapse.

Samson and the Philistines

The function of costume and drapery

In the above picture by faculty member Austin Briggs, the costumes do much to place the scene immediately. His knowledge of drapery is skillfully brought to bear on the subject of his picture so that it becomes a real part of the design. The sketches of the helmets were done to familiarize himself with their form so that when he came to painting them he could do so with assurance. The three sketches of the draped arm were done from models, but as it finally appeared, it was not a copy of any one of the sketches — it was a synthesis of all three. Blindly copying a preliminary study of drapery, if it is not suited to the design of your picture, is wrong, for drapery, if it is to mean anything, must be made an integral part of the picture. The study of the dead soldier below, though not finally used in the picture, is an excellent example of how to describe a figure with drapery.

Drapery

The individuality and character of drapery is almost as important in the drawing of a figure as the figure itself. Cloth, by itself, is without any particular form or character, but in use, it becomes "alive" and it is this live action of cloth, which we call drapery, that chiefly concerns us here.

Many distinct kinds of folds are present in drapery, each of which must be analyzed before its character and individuality can be expressed. There are folds that clasp, radiate, curve, fall and dip. There are others that drop, lock and zigzag. But the structure of all these various folds is governed by several basic laws. If you understand and memorize them, you will have a sound, working basis for draping a figure or still life. First of all, however, we must *study the principles* that determine the shapes of folds and *learn to draw folds.*

Laws of gravity

All folds are first governed by the laws of gravity. This can be proved in a very simple way. Hold a square piece of cloth in front of you and release it. It drops to the floor because of gravity and lies there inertly. *Its predominant characteristic is that it conforms to the flatness of the floor.* If you should drop it several times, this characteristic would not change — although the variety of folds may differ each time it is dropped. Now pick it up by an edge and hold it at arm's length. Pulled downward by the force of gravity, all the material falls toward the floor from the point where you grasp it. *This is its point of support* and you can see that folds of a definite character have developed. These folds are tubular or pipe-like and they hang vertically. You can repeat this simple experiment as many times as you wish and these pipe folds will always recur.

Now, take hold of the lower end of the cloth and lift it up until it is level with your other hand. Spread your hands slightly apart. Notice that folds of a different type, of a dipping or curving nature, sweep across from hand to hand. The slack in the center of the cloth is pulled down by gravity between your two hands — the two points of support. You could repeat this experiment endlessly and, while the details of the folds might vary, the character of the folds would always be the same. This is true because the laws of gravity and the principle of the point of support are at work.

Laws of folds

While all folds are governed by the laws of gravity and by the point, or points of support, the character of the folds is, to a great extent, controlled by their function. With the addition of the principle of function, we actually have three things to remember: 1. *The laws of gravity,* 2. *Points of support and tension,* 3. *The function.*

Although folds may appear to be of a complex nature, they are not. Folds have, in fact, been classified according to a series of laws. The formulation of these laws became possible when it was learned that, under given conditions, predictable folds recur with only minor variations. For example, the marginal drawings on this page show the pipe-like folds falling from a *single point of support* and the curving folds when the cloth has *two points of support.* Under similar condi-

In repeating a fold, only details change.

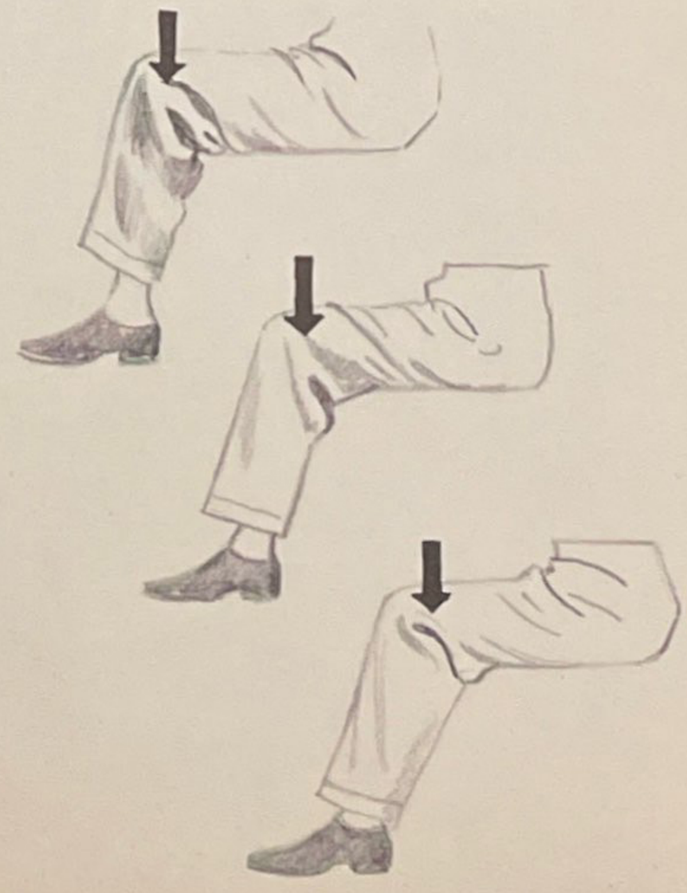
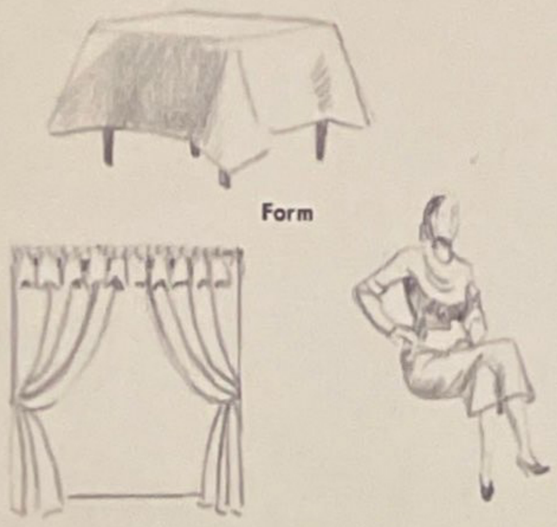


Figure in action



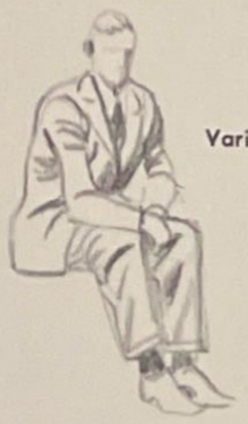
Form

tions these folds will recur constantly and from this knowledge general laws were formed. The folds may vary in detail but the conditions that form them will not permit variations in their fundamental character.

Folds are classified according to seven basic laws. Their names, which indicate their function, are: 1. *Pipe,* 2. *Zigzag,* 3. *Spiral,* 4. *Half-lock,* 5. *Diaper,* 6. *Drop,* 7. *Inert.* You must thoroughly understand these seven laws because you are going to be constantly confronted with them. By understanding them, you will keep "out of trouble" when you are drawing and will not make meaningless marks indicating folds. The folds you draw will be decisive, directional and convincing. If you are drawing from a model, you will quickly recognize each type of fold and its function instead of copying the detail that meets the eye.

These laws were determined by the seven different functions of folds whenever cloth is *used.* If cloth is *used* as a drape over a figure, its function is controlled by the shape of the figure beneath and most of the seven laws *occur somewhere* on a draped figure. The depths of the folds are determined by the abundance of cloth in the slack areas between points of support or opposite the place of resistance. Remember, there is a factual reason for the behavior of each fold. They are *not* just a bunch of wrinkles. *They are governed by basic laws.*

Cloth conforms to the form beneath it. For example, a table cloth conforms to the form of the table. Folds in curtains are determined by points of suspension, tie-backs or fullness. Folds in a sleeve are determined by the arm beneath, *and at the same time* they contribute satisfactory definition to the structure of the underlying form.

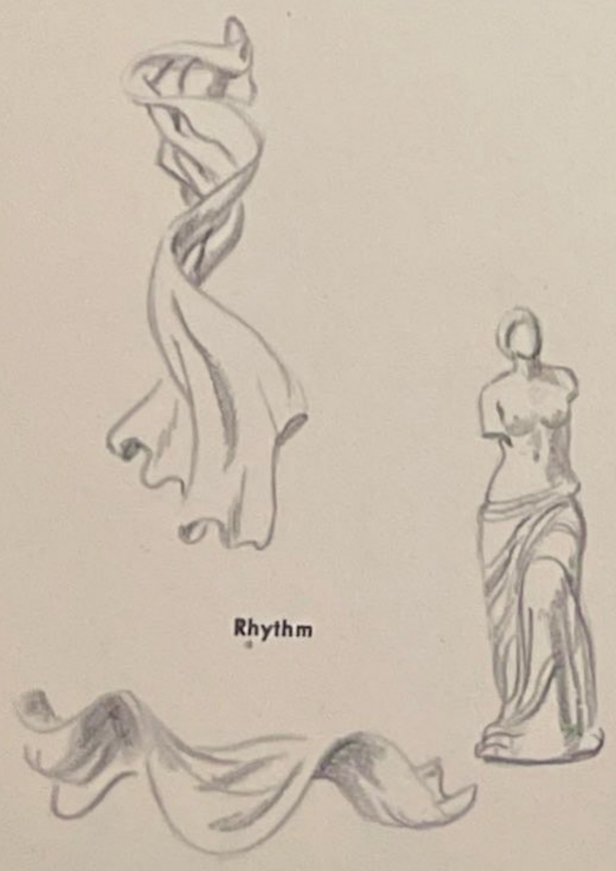


Variety

Variety

Varieties of folds are not "new" folds; they are only modifications of one or more of the seven basic folds. These modifications are caused by slackness, fullness, tension and direction – *PLUS* the form of the structure beneath. In the human figure, many motions, attitudes and postures contribute variety. The style, cut of a garment and the quality of material cause diversity. Groups of folds in one area will be contrasted by simple areas. Spiral folds will contrast with angular ones, and zigzag folds with half-locks as the tension and support points shift.

As we have told you many times in this course, *variety plus unity* is a requisite of art. You will find that in drapery, the variety in folds is always unified by the shape of the form beneath it. This is a fortunate thing because it automatically eliminates folds that have no meaning. Don't forget that variety in folds must have a purpose, and that purpose is determined by the function of the underlying form.



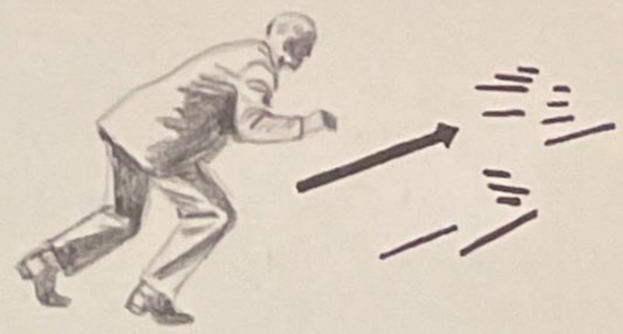
Rhythm

Rhythm

The rhythm of drapery can be considered in many ways. There is the pure harmonious flow of a fold. There is the rhythm of a group of diaper folds that meet and die away. There is the precise rhythm of pipe folds fanning out from their point of support, the repetition of zigzag folds diminishing in size, the free flowing folds of motion. Then there are all of these in contrast to one another, large against small, deep against shallow, ending in a harmonious rhythmic arrangement. All artists, from the earliest times, have used the rhythmic quality of drapery in paintings. It is probably the most rhythmic form.

Direction and emphasis

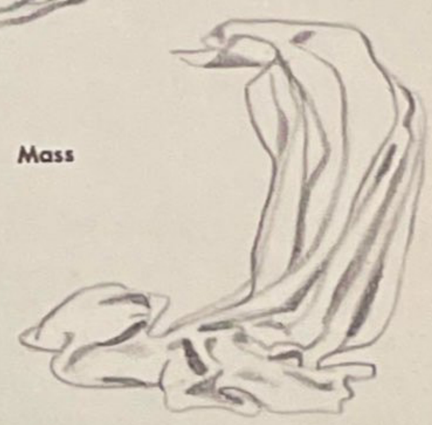
There are few forms that can *show direction* better than drapery. This happens because we readily accept the effect of gravity. The observer orients himself quickly by an angular direction, a vertical drop or a flowing suspension from point to point. Strain or resistance is quickly understood by tightness and direction of folds. The sharp, the graceful or the rhythmic flow of drapery in motion interprets speed and direction. Pressing your hand into a pillow will create radiating folds from a central point. We can quickly detect specific motions of the human body by the direction and emphasis that the folds create. There are recognized folds created by motions that are accepted by everyone. They become symbols of direction and emphasis.



Emphasis

The mass

A group of folds is not a mass of unrelated wrinkles. There is order among folds just as there is among any other forms. As in all art, good organization and relationship must be carefully adhered to. If the character of a draped form is best shown through a profusion of folds, then there "should be a profusion of folds." *BUT they must still be organized* and be logical in type and function, and they must reveal the nature of the underlying form. The mass of folds must not destroy the shape of the object beneath, and by mass we mean the total area of drapery regardless of its character, type or function. The mass must be consistent with the object it is draping; it must have composition, rhythm, tone, interval and texture – all the requirements of good design. All of the "activity" must not allow the folds to become important only in themselves. They should emphasize rather than dominate the form. The total form can many times be "lost" because of the interest in folds. To avoid this, study what the folds are doing as they relate to the form they are draping.



Mass

Procedure

It is best to proceed by looking at the whole mass of drapery first and by first catching the strongest emphasis, direction or curve. Then go on to the secondary or less important folds. This will keep you from losing the dominant fold and you will be proceeding in a logical manner. Do not become involved in detail before you have mastered the big problem. Detail is of no importance unless the basic structure and function is right. These must first be analyzed and understood. In this lesson we want you to *understand* the seven laws of folds. If you *understand* them, you have solved half of the problem of drawing them. But if you just look at the drawings and diagrams, you will be doing yourself an injustice. As you study these laws, always keep in mind these three things; 1. *The laws of gravity,* 2. *The points of support,* 3. *The function.*

First
The dominant folds

Second
The subsidiary folds

Gravity – support and tension – function

All drawing of drapery radiates from these three words. If you can fix them firmly in your mind, they will act as a cure for drapery trouble. Also memorize the seven laws of folds.

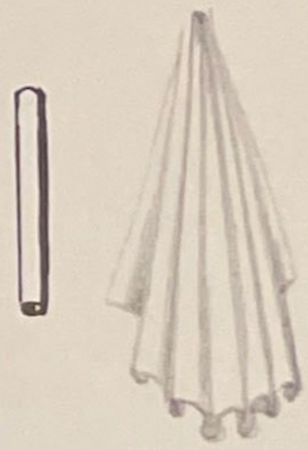
1. Pipe 2. Zigzag 3. Spiral 4. Half-lock 5. Diaper 6. Drop 7. Inert

Now we will show you how to apply these principles and laws.

Figure in action

The laws of folds and their simple diagrams

Here are the geometric diagrams of folds. We show you these, stripped of all nonessentials, so that you may better understand the *basic* direction and structure of each one. Actually the different types of folds *do not* repeat themselves *exactly* — only the principles are repeated. These diagrams are the principles. We hope they will help you to see through the irregularities present in all folds, regardless of the type of fold, and allow you to see the structure.



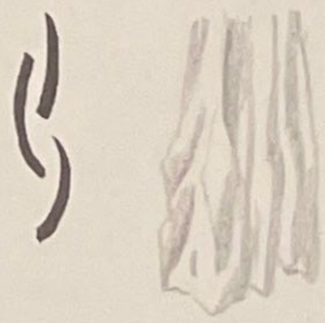
Pipe fold
This is not an exact pipe, but a tubular-shaped fold. It must be drawn to have a cylindrical feeling.

Zigzag fold
One fold is fitted into the next. The folds are usually contrasting in direction, are repetitive and interlock.

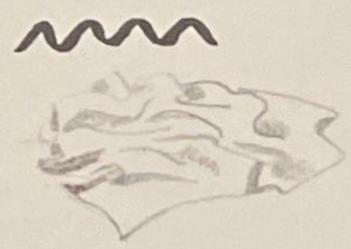
Spiral fold
This fold is usually tubular in structure, but has a feeling of continuity in an ascending or descending manner.

Diaper fold
This fold is triangular in shape, dropping away in a curving manner from one point to another on a horizontal line. Sometimes this has an angular, rather than a curved change of direction.

Half-lock fold
This fold is caused by a sharp change in direction. The emphasis is on the point where the direction changes and the slack areas meet.



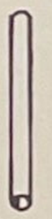
Drop fold
Irregular dropping, creates numerous types of folds in the process. The emphasis is on the **dropping** action rather than on the detail of the individual fold.

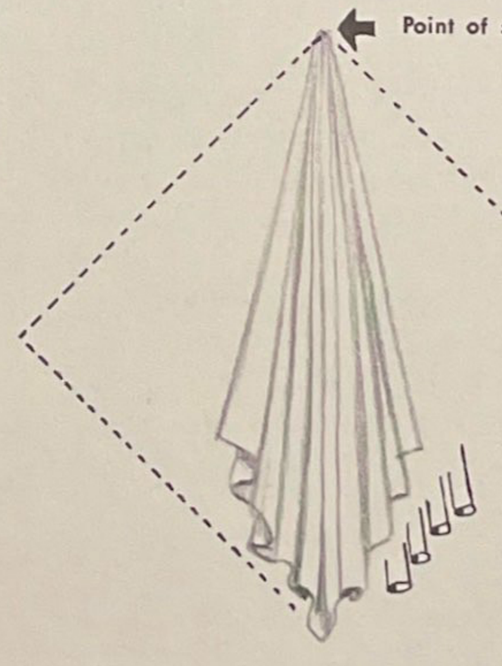


Inert fold
These folds are characterized only by the horizontal surface on which they are resting.

Pipe fold

The pipe fold is the simplest form of drape. It usually occurs from one point of suspension or when pulled *between* two points. Always draw this fold with the understanding that it is the *condensing of a large area* of cloth into a smaller area. It is usually influenced by gravity and is under no strain, having a more or less smooth, even flow.





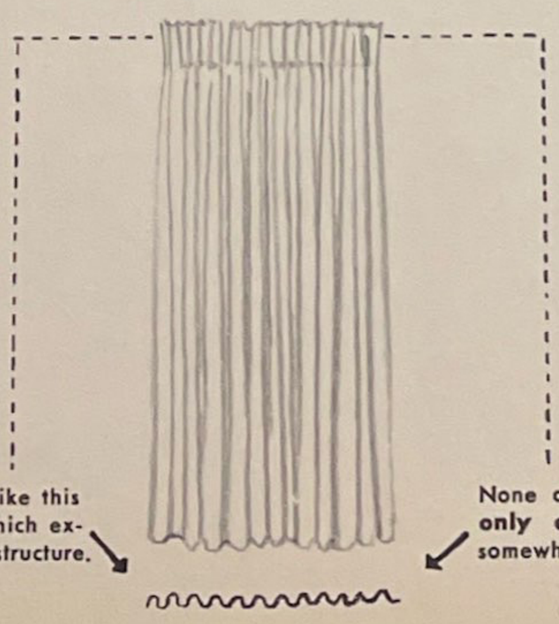
The dotted line indicates the approximate fullness of the cloth before gravity influences it.

The lower part of the folds shows their round, pipe-like structure.

Here we illustrate the pipe folds by stretching them between **two** points. The folds fan out and get larger at the center.

A drape or curtain is gathered together at the top.

This is the area of cloth that is condensed in the drape by gathering it at the point of support.



The cloth looks like this from the end, which explains the pipe structure.

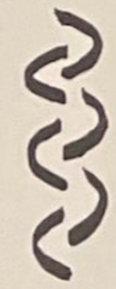
None of the cloth is removed. It is **only condensed.** Cloth **must** go somewhere. It has to fold.

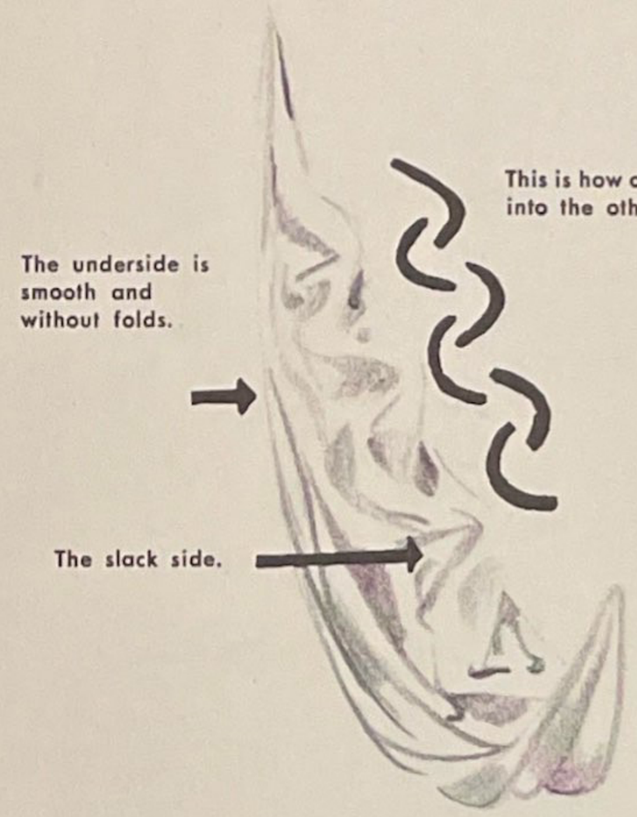
The fullness in this garment is gathered around the waist, which is the point of support. The pipe folds gradually fan out and radiate downward. Folds in a garment will vary in width when the action of the figure changes.

Figure in action

Zigzag fold

This fold usually occurs when a pipe fold is bent. The zigzag is on the slack side of the bend. This slack buckles in an uneven criss-cross way. It occurs because there is an uneven twisting of the fold that sets up a sharp, interlocking zigzag. These zigzags may not be even. The main thing is to keep the character and direction of the repetition.



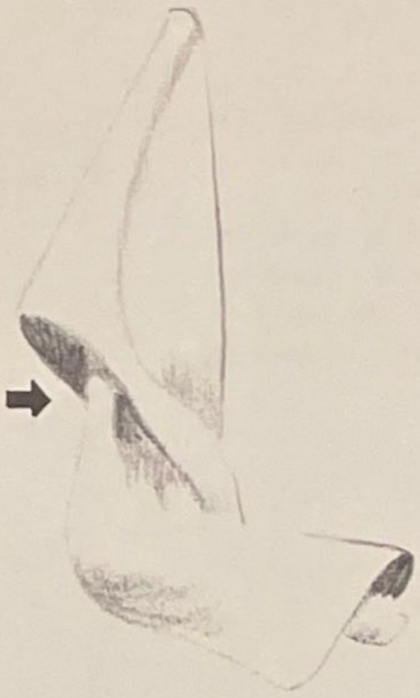


The underside is smooth and without folds.

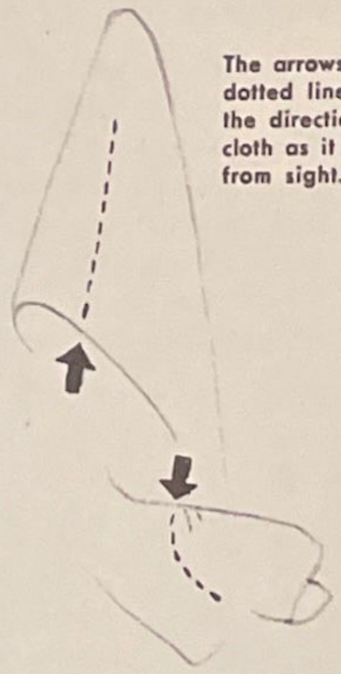
This is how one fold fits into the other.

The slack side.

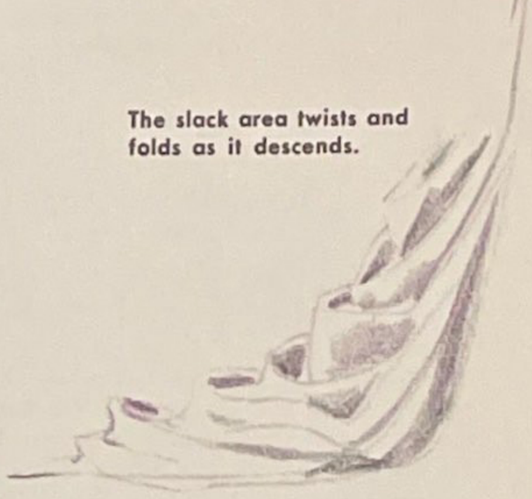
Study the way this part of the fold wedges into the next part.



Each slack section folds in contrast to the next one. It is caused by the twisting of the cloth.



The arrows and the dotted line show you the direction of the cloth as it disappears from sight.

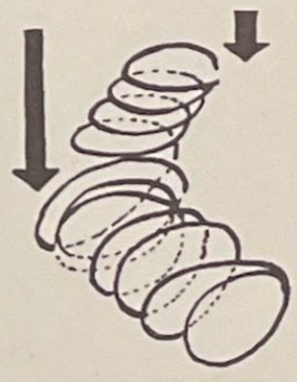


The slack area twists and folds as it descends.

Spiral fold

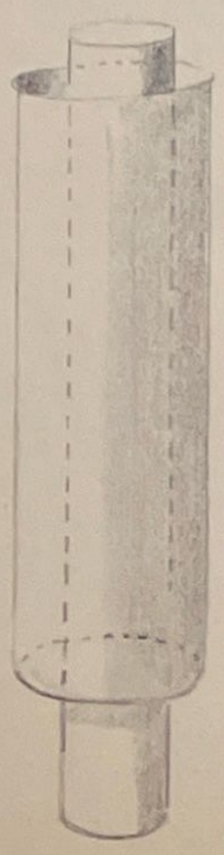
This fold is usually wrapped around a tubular form. It will change direction as the points of support and tension vary from place to place Sleeves and trouser legs present good examples.

The direction of the spiral is toward the **slight** tension. If the tension increases, the spiral will tighten. Spiral folds must appear to revolve around a form. Study the diagram and see how the dotted lines follow the spiral around the unseen side of a form.



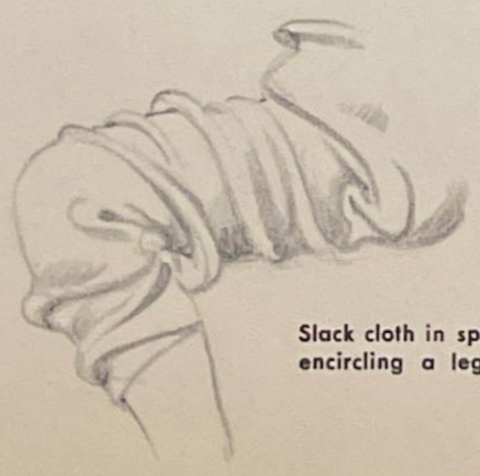
Notice how the spiral fold follows the form and changes its angle where the form changes its direction. When drawing, follow this "through" in the manner shown in the diagram in the upper right.

By twisting, cloth can create spiral forms in itself and have no solid form underneath it.



A tubular piece of cloth is placed around a cylinder with about the same amount of slack found between a sleeve and an arm.

The amount of cloth is not reduced but condensed into a smaller area. It cannot leave the cylinder and consequently it begins to spiral as it is condensed. This is caused by the restriction of the slack between the cloth and the form.

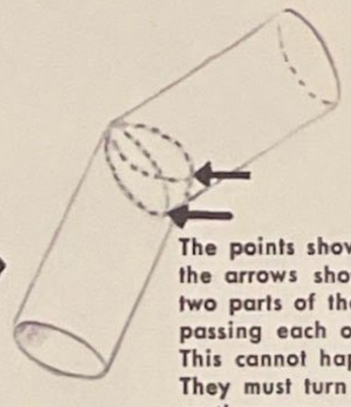


Slack cloth in spiral form encircling a leg.

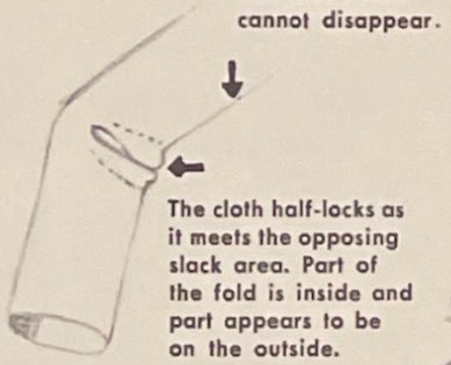
Figure in action

Half-lock fold

The half-lock fold occurs when tubular or flat pieces of cloth change direction. The fold always occurs on the slack side. To draw the half-lock, first sketch in the general form of the drape. Next mark the angle of the turn. This is where the half-lock occurs. Then draw the rise and turn of the excess cloth as it folds in and out of sight.

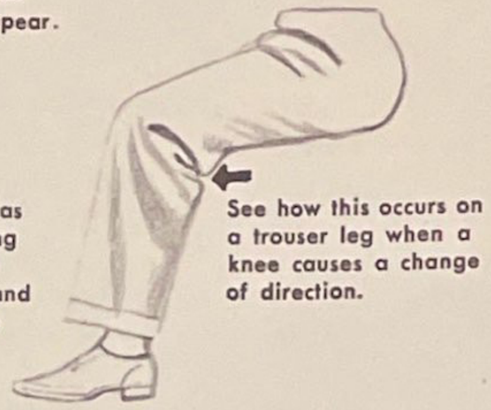


The points shown by the arrows show the two parts of the cloth passing each other. This cannot happen. They must turn back as they are parts of a single continuous flow of material.



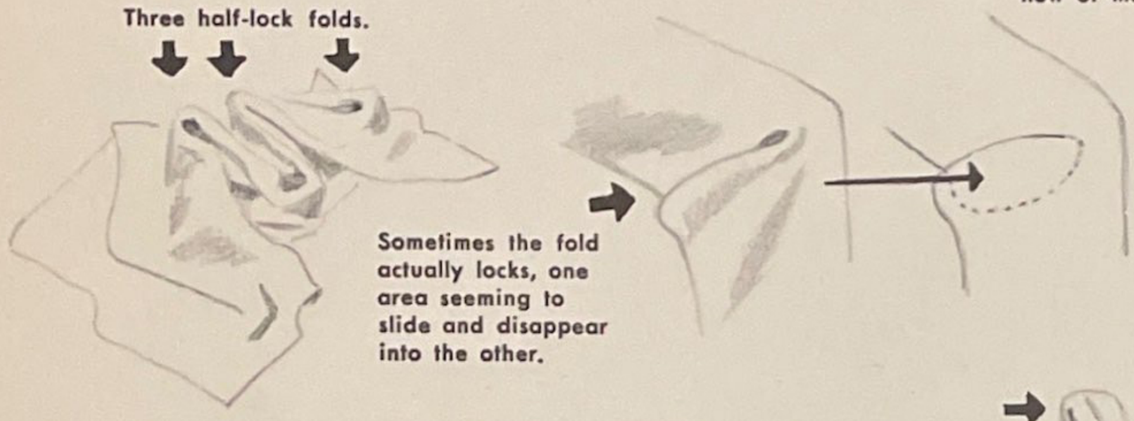
The slack side cannot disappear.

The cloth half-locks as it meets the opposing slack area. Part of the fold is inside and part appears to be on the outside.



See how this occurs on a trouser leg when a knee causes a change of direction.

Three half-lock folds.

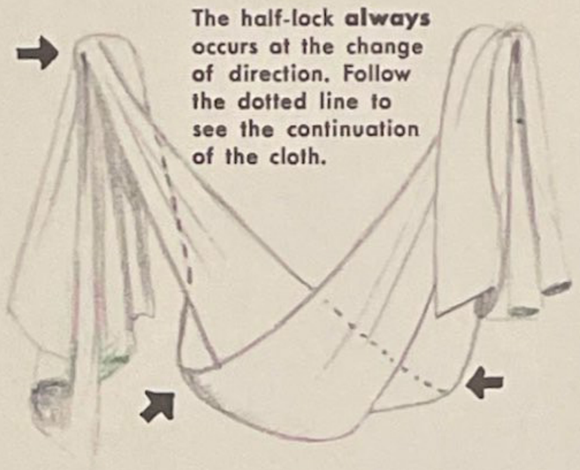


Sometimes the fold actually locks, one area seeming to slide and disappear into the other.

Notice that the angle and direction of these half-lock folds are only slightly irregular. The change of direction here is mostly in the fold itself caused by the slackness in the cloth.

Double half-lock.

The half-lock **always** occurs at the change of direction. Follow the dotted line to see the continuation of the cloth.

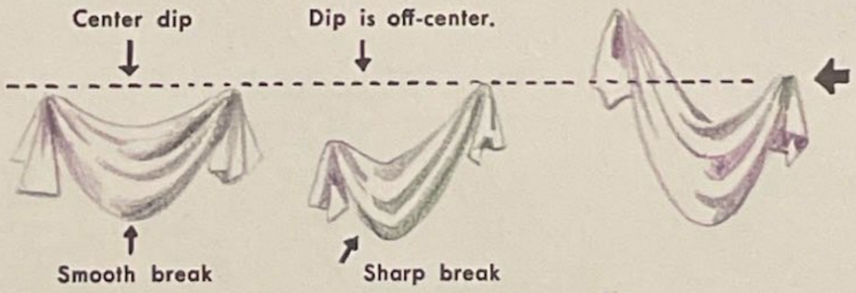


There are two changes of direction —one at the leg torso connection, the other at the knee.

The lower area of the skirt appears to "lock" into the upper area.

Diaper fold

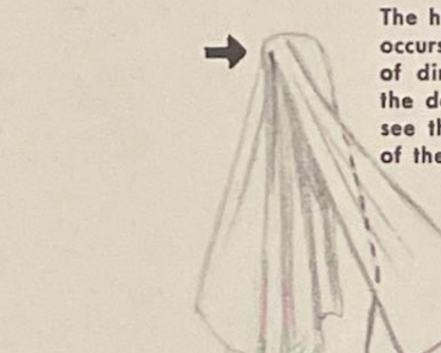
From *two* points of support, the diaper fold occurs at the break or turn of the cloth. This is usually on a wide, flat surface, rather than on a tubular piece of cloth. Always draw this, accenting the sweep of the curve. The top of the curve is usually sharp, and the lower side of the fold is softly shaded. The angle and roll of the fold will change in character with different qualities and weights of material. As the points of support vary, the angle of the dip changes. See the diagram on the right.

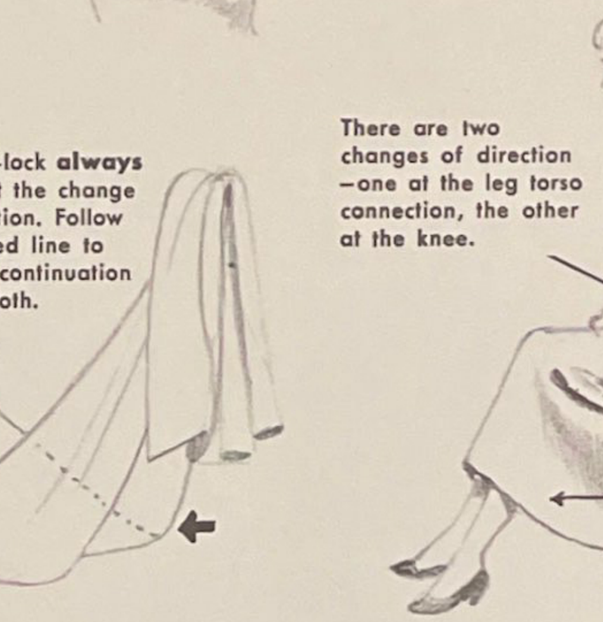


The angle breaks or turns at the center when the points of support are horizontal. Otherwise the turn will favor the lower point of support and will break more sharply and with a more decided angle.

An angular view of a diaper fold.

Diaper folds drape halfway around a cylinder.

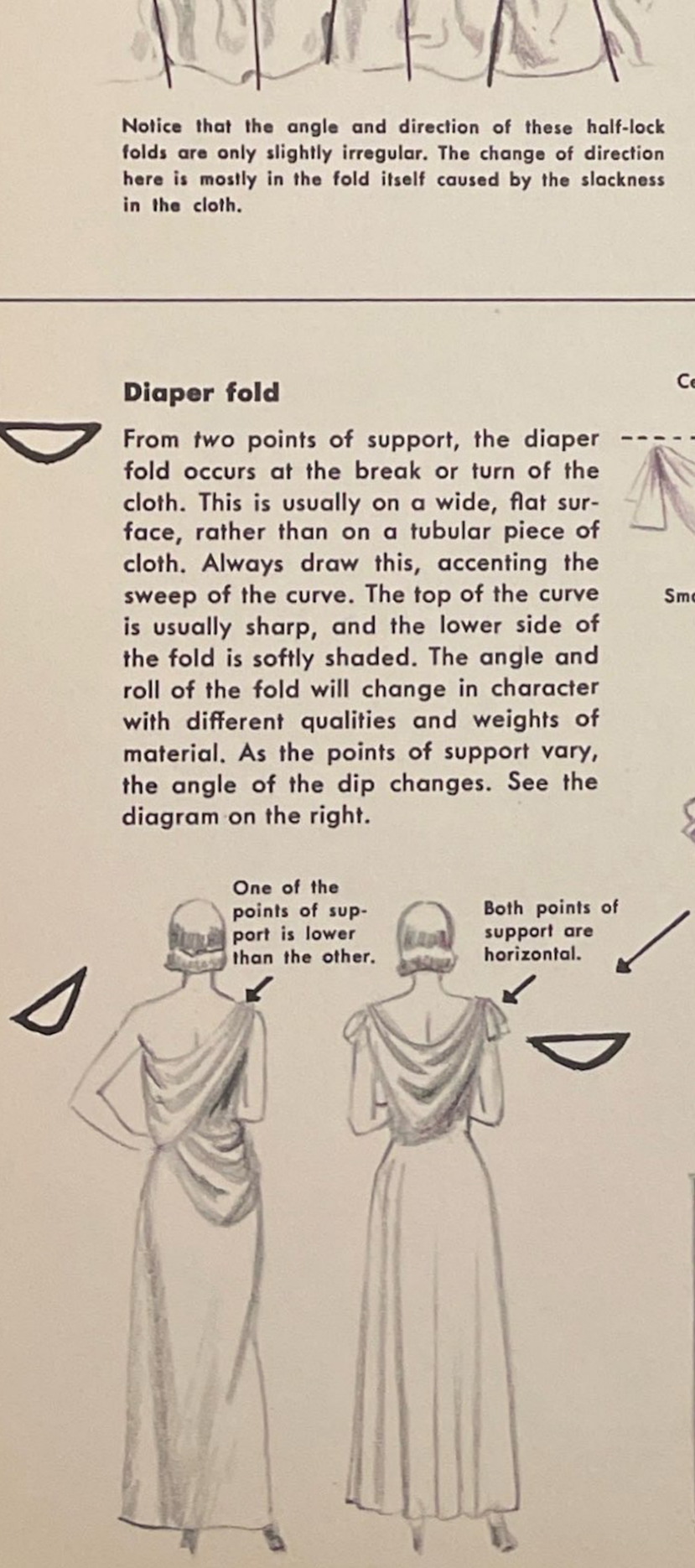


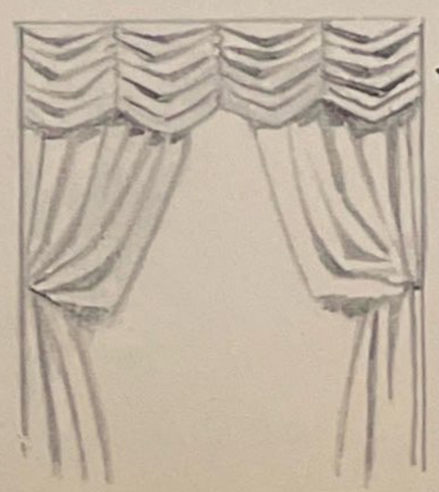


When drawing a diaper fold, start by getting the "sweep" of the fold in all of its rhythmic qualities. Then proceed to model it with shading **without** losing its direction and character.

One of the points of support is lower than the other.

Both points of support are horizontal.





A series of diaper folds in curtains.

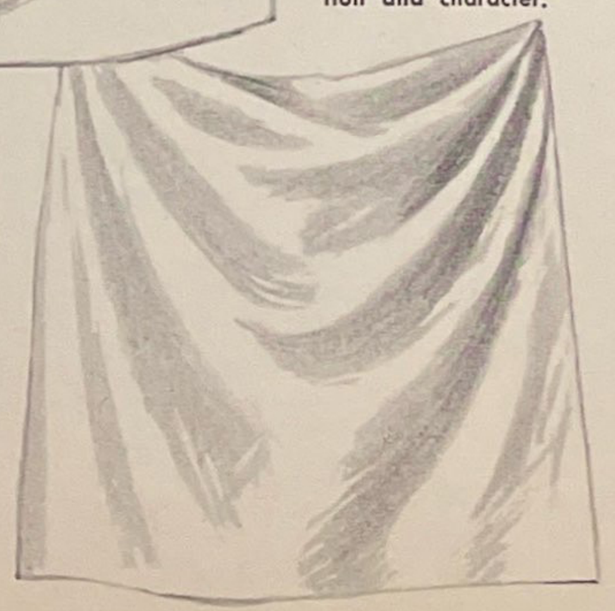
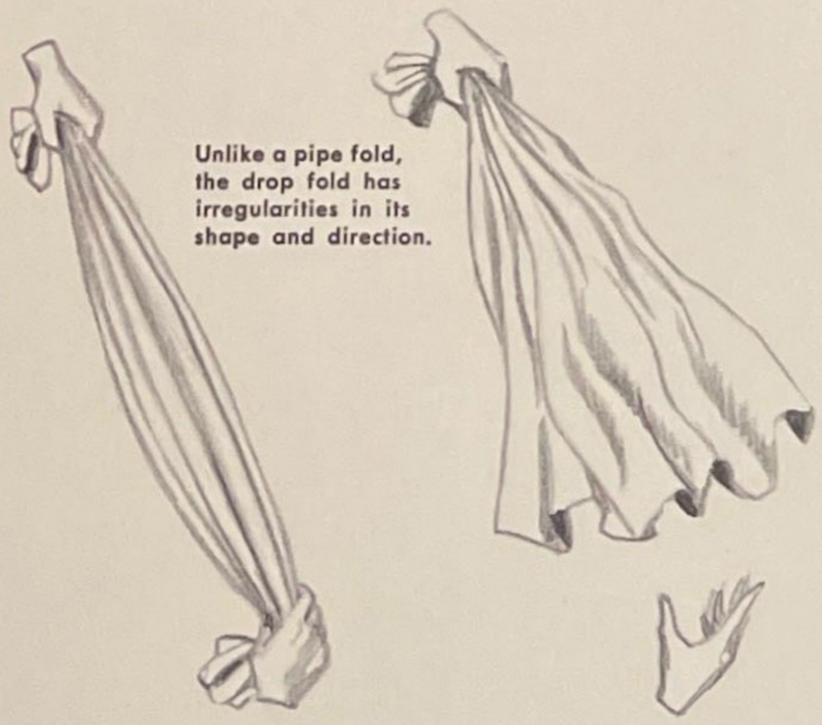


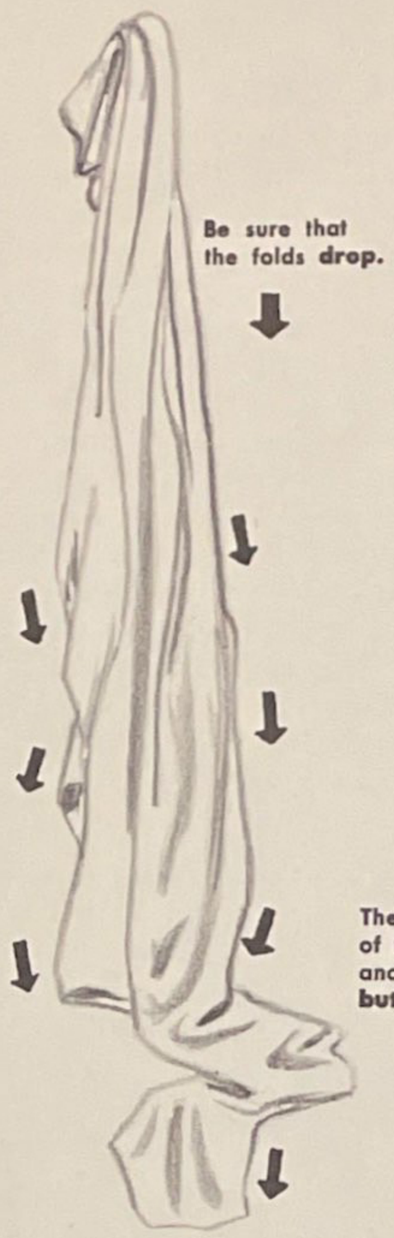
Figure in action

Drop fold

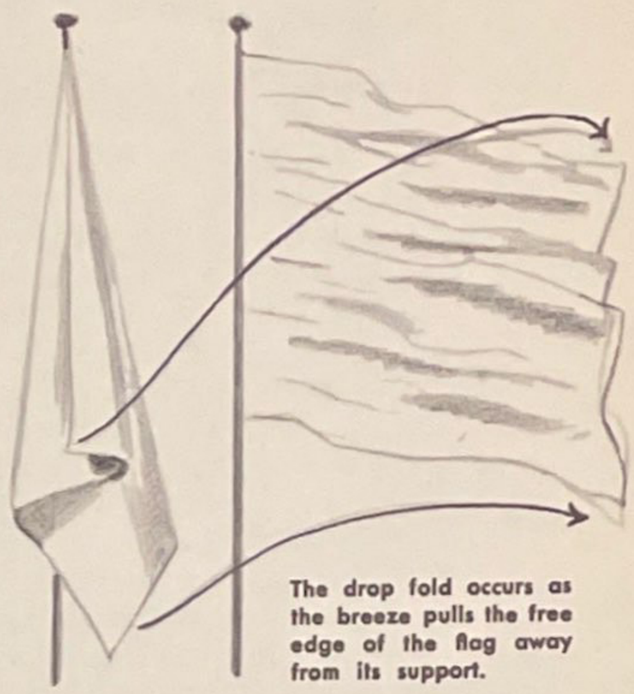
From a point of suspension, the drop fold twists, turns and staggers. Sometimes it hangs straight, like a pipe fold. At other times, a curved edge will give it a spiral effect. The important characteristic is that *it is dropping* – regardless of small folds that occur during the process. Drop folds will contain small zig-zags, spiral, and half-locks – but they all contribute to the entire drop of the cloth.



Unlike a pipe fold, the drop fold has irregularities in its shape and direction.

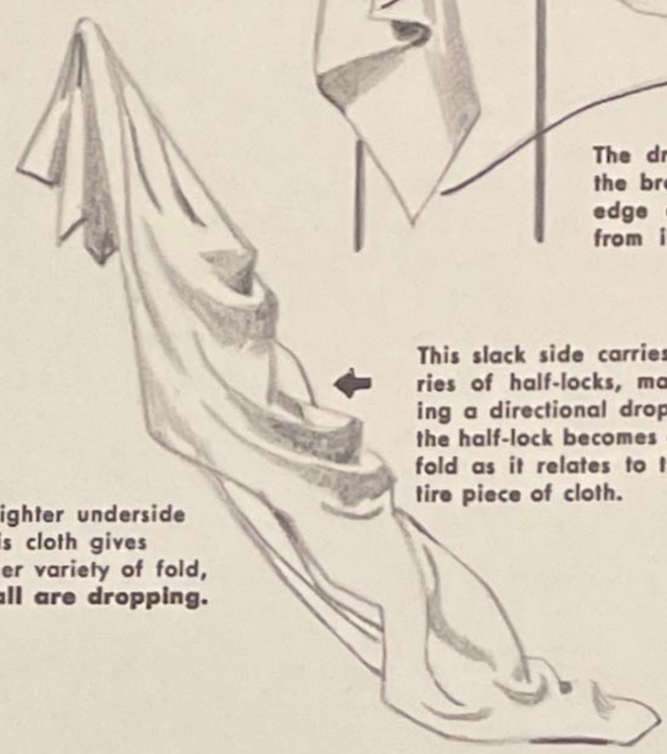


Be sure that the folds **drop.**



Pulled by gravity, a flag hangs in a series of pipe-like drop folds.

The drop fold occurs as the breeze pulls the free edge of the flag away from its support.

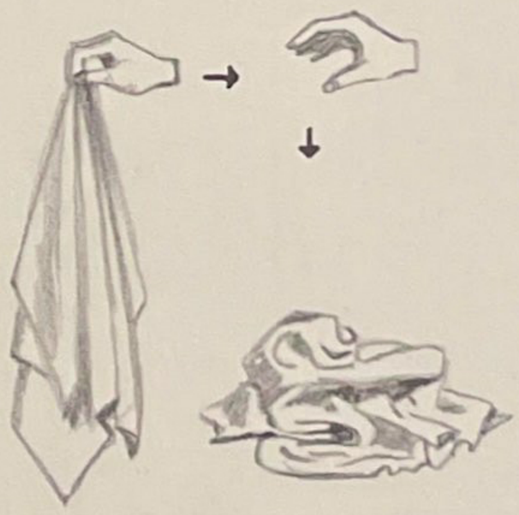


The tighter underside of this cloth gives another variety of fold, **but all are dropping.**

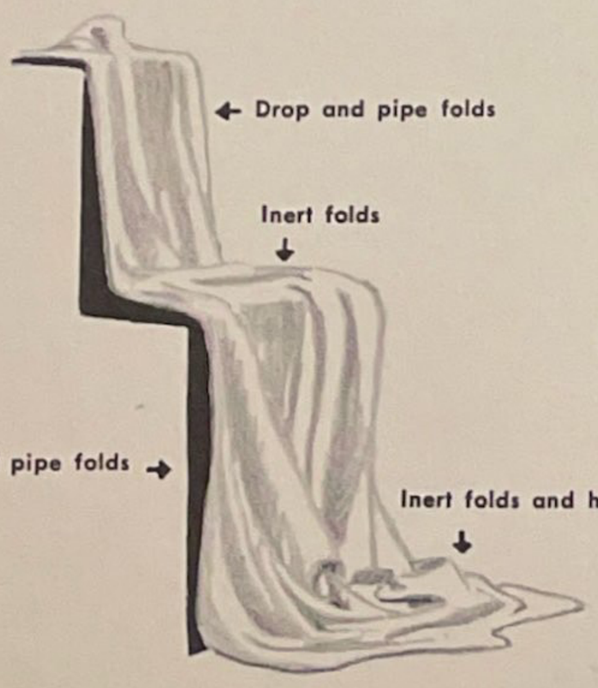
This slack side carries a series of half-locks, maintaining a directional drop. Here the half-lock becomes a drop fold as it relates to the entire piece of cloth.

Inert fold

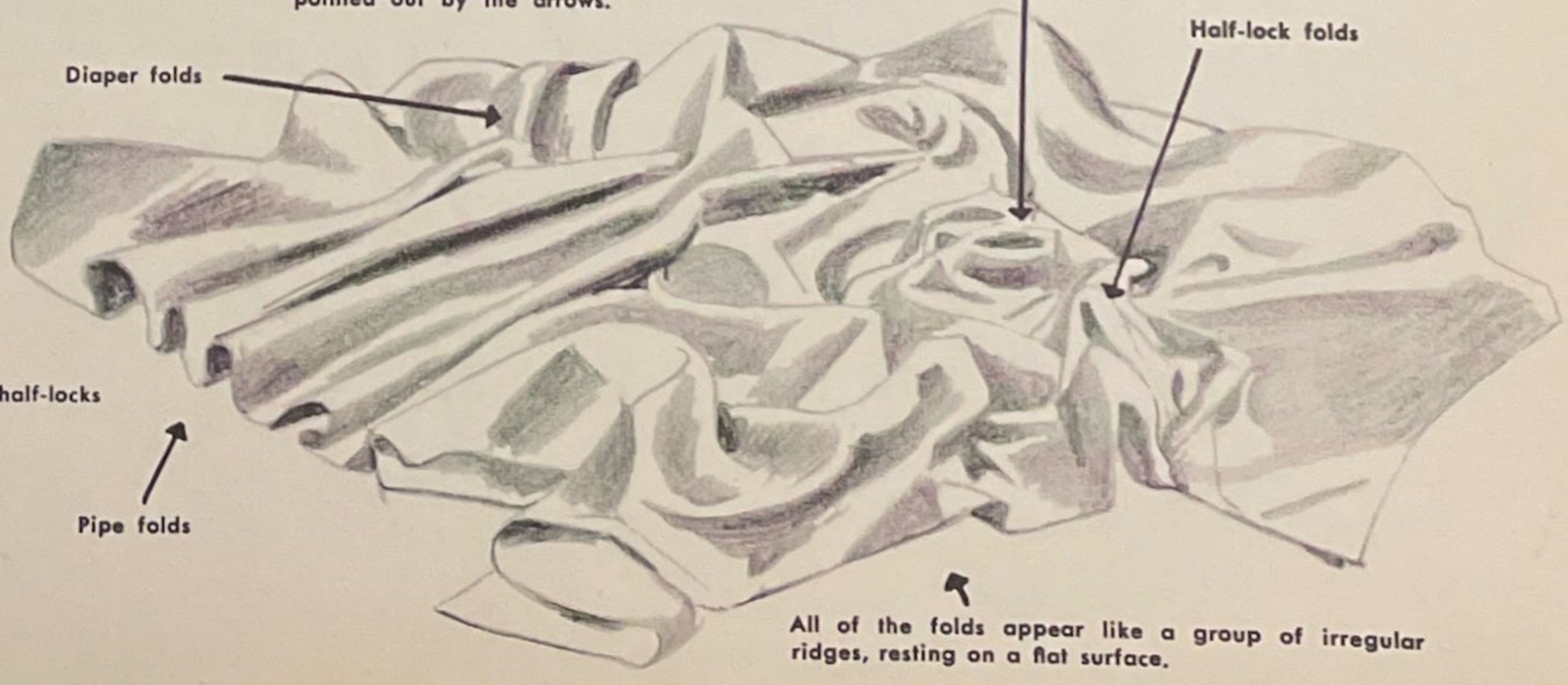
The best explanation of an inert fold is to call it a "dead" fold. We say this because it is not active, or in use, but lies inertly. It can have all manner of individual folds on its top surface. Its basic characteristic is that it is lying limp, on an inactive surface. Its over-all feeling and direction will be characteristic of the surface upon which it is resting.



Inert folds are governed by the shape of the surface upon which they are resting.



Inert folds usually contain a variety of folds and need careful study. This one contains many different folds, as pointed out by the arrows.

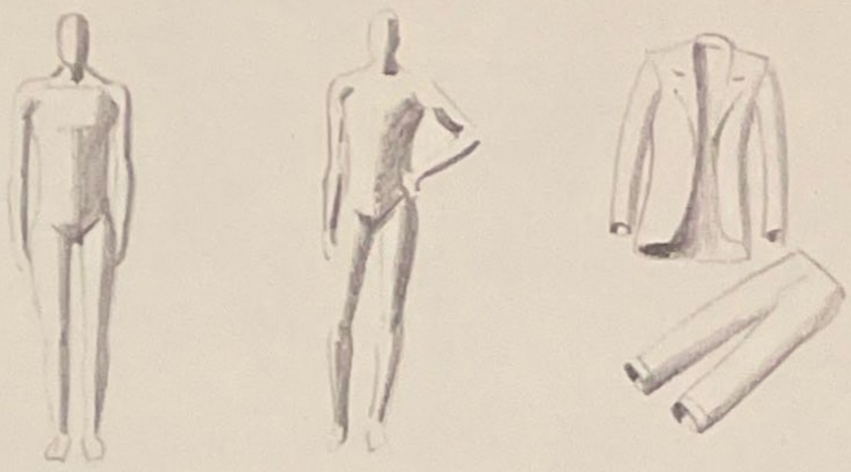


All of the folds appear like a group of irregular ridges, resting on a flat surface.

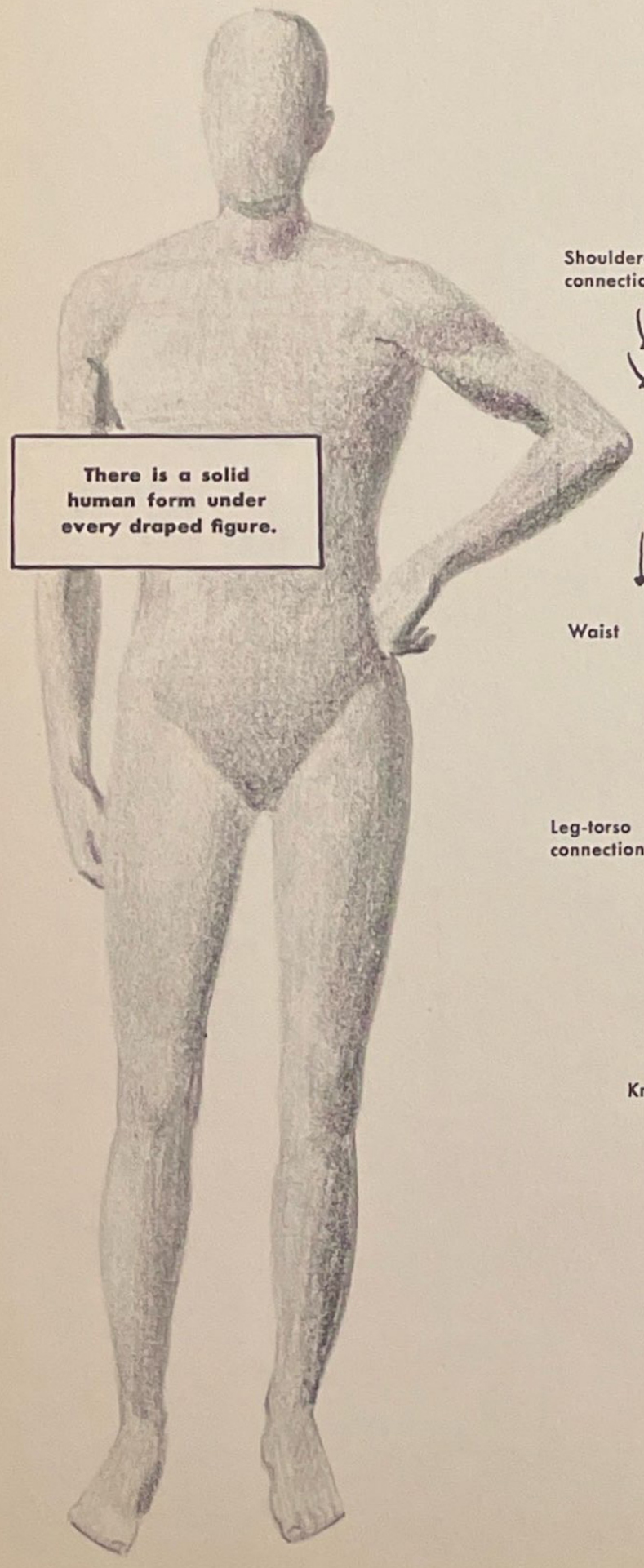
Figure in action

Draping the male figure

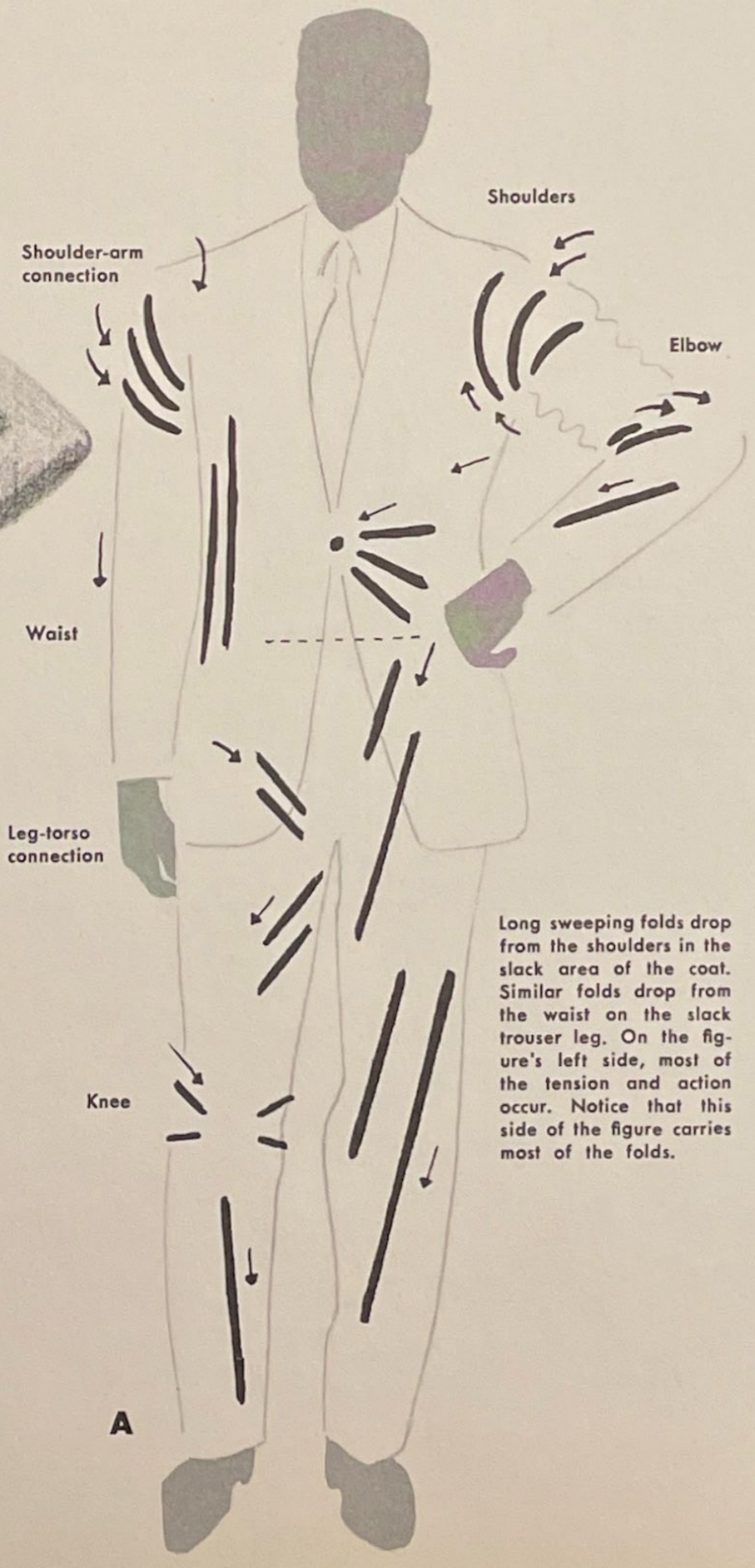
The folds in a draped figure are controlled by three factors: 1- The shape of the underlying form, 2- The action of the figure, 3- The cut of the garment. The folds caused chiefly by the laws of gravity are supported at two places: the shoulders and the waist. These folds are of a long and flowing nature. The folds caused mainly by tension occur at various points and are condensed in character. The main points of these folds are: shoulder-arm connection, elbow, waist, leg-torso connection and the knee. A study of the general character of each group of folds is necessary to drape the figure well. A garment is cut to clothe a figure and at the same time allow for its necessary motion and action. A garment is not just a piece of cloth, it is a cylindrical shape that is confined and has definite limitations of volume. A sleeve, a coat or a skirt is shaped to cover a similar form, allowing excess cloth for free use of the underlying form. When an arm, torso or leg bends or changes direction, the cloth slackens on the opposite side of the tension. This cloth obviously does not change in amount; it just condenses. As it condenses, it creates folds that behave in definite ways in different places. The way they behave is determined by gravity, tension, support and action. The captions and arrows on these pages need careful study. They cover the basic causes and directions of garment folds.



The shape of the form – the action of the figure – the cut of the garment are controlling factors in draping the male figure.



There is a solid human form under every draped figure.



Long sweeping folds drop from the shoulders in the slack area of the coat. Similar folds drop from the waist on the slack trouser leg. On the figure's left side, most of the tension and action occur. Notice that this side of the figure carries most of the folds.

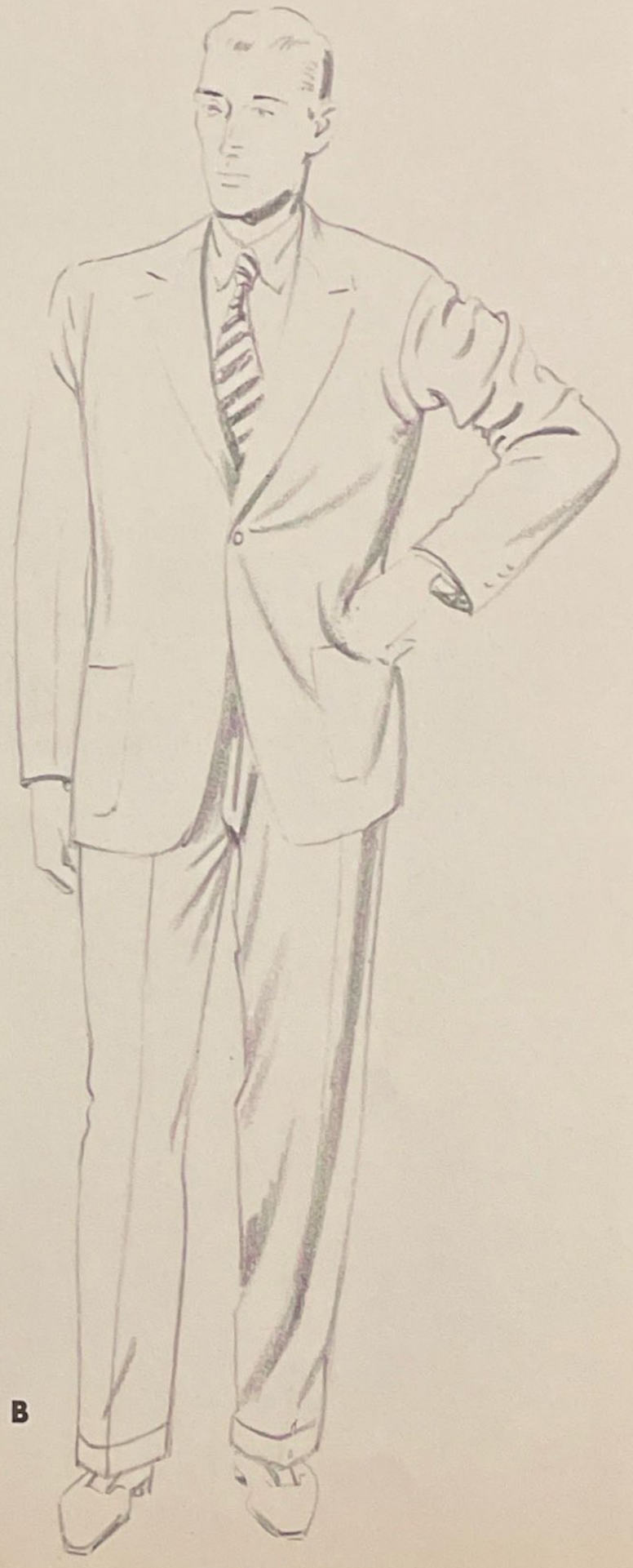
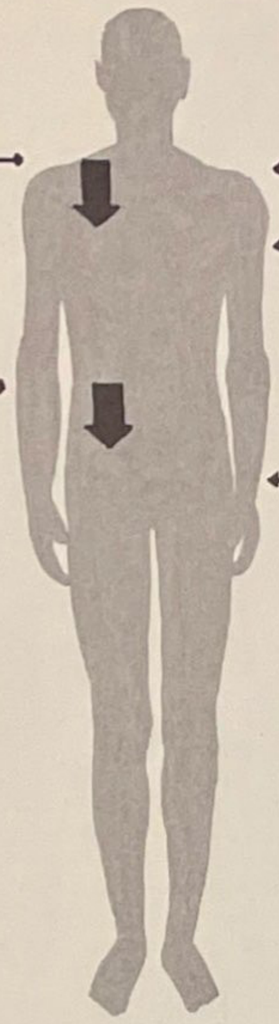


Figure in action

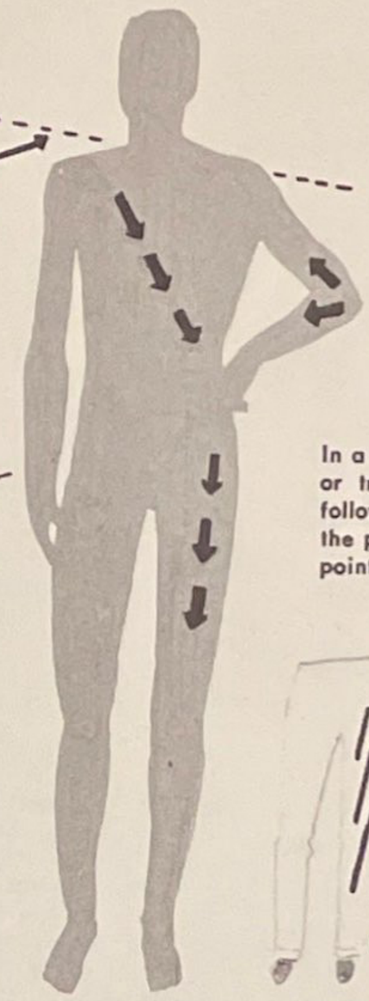
There are two basic points of support in draping the figure, the shoulders and the waist. All folds are controlled by these two points. On a standing, inactive figure the folds, influenced by gravity, drop with only slight irregularities caused by the changing contours of the body. In draping the male figure, the most important of these irregularities occur where the sleeve joins the shoulder and where the trousers meet the crotch.

From the outside edge of the shoulder, and from the protruding edge of the chest, the folds are pulled downward by gravity.

Although the trousers are supported at the waist, the wider point of the body at the hips becomes the **actual** point from which the folds fall downward.

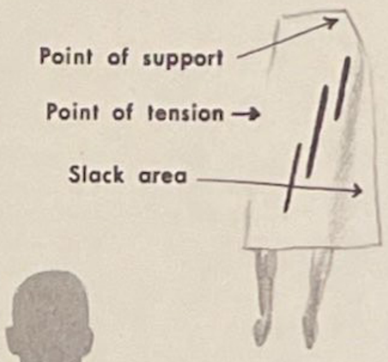


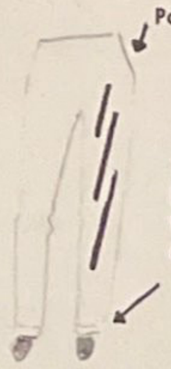
As the shoulders and hips change position by a shift of balance to one leg, the points of support also change position and create a different tension. The dark arrows show the direction of the flow of folds which descend from the highest point of support and strongest points of tension.



Folds radiate from the protruding edge and follow the direction of the form.

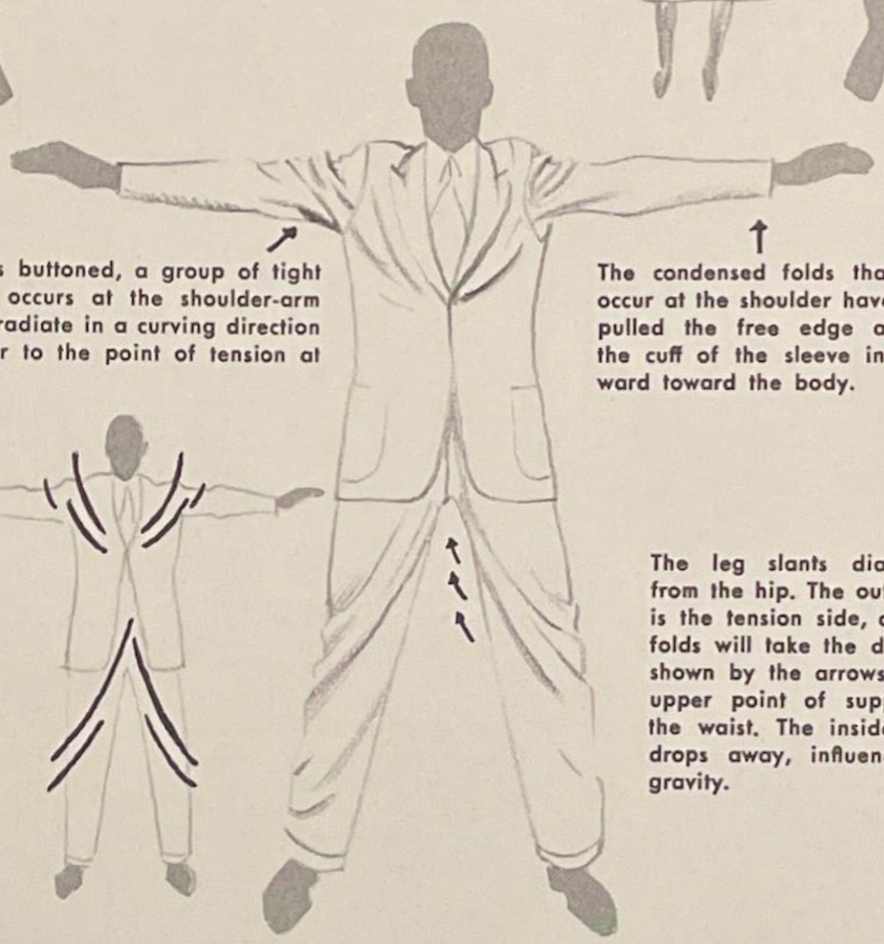
In a tight, enclosed garment, such as a skirt or trouser leg, the folds fall diagonally, following the contour of the form. Below the point of tension, and on the side of the point of support, a slack area occurs.





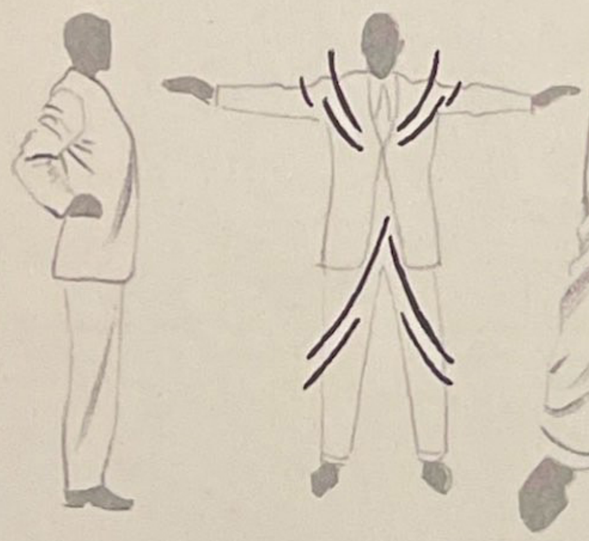
This edge is always slack, being opposite the point of tension and on the side of a point of support.

The farthest protruding edge becomes the point of radiation of the folds, although it may not be the actual point of support.



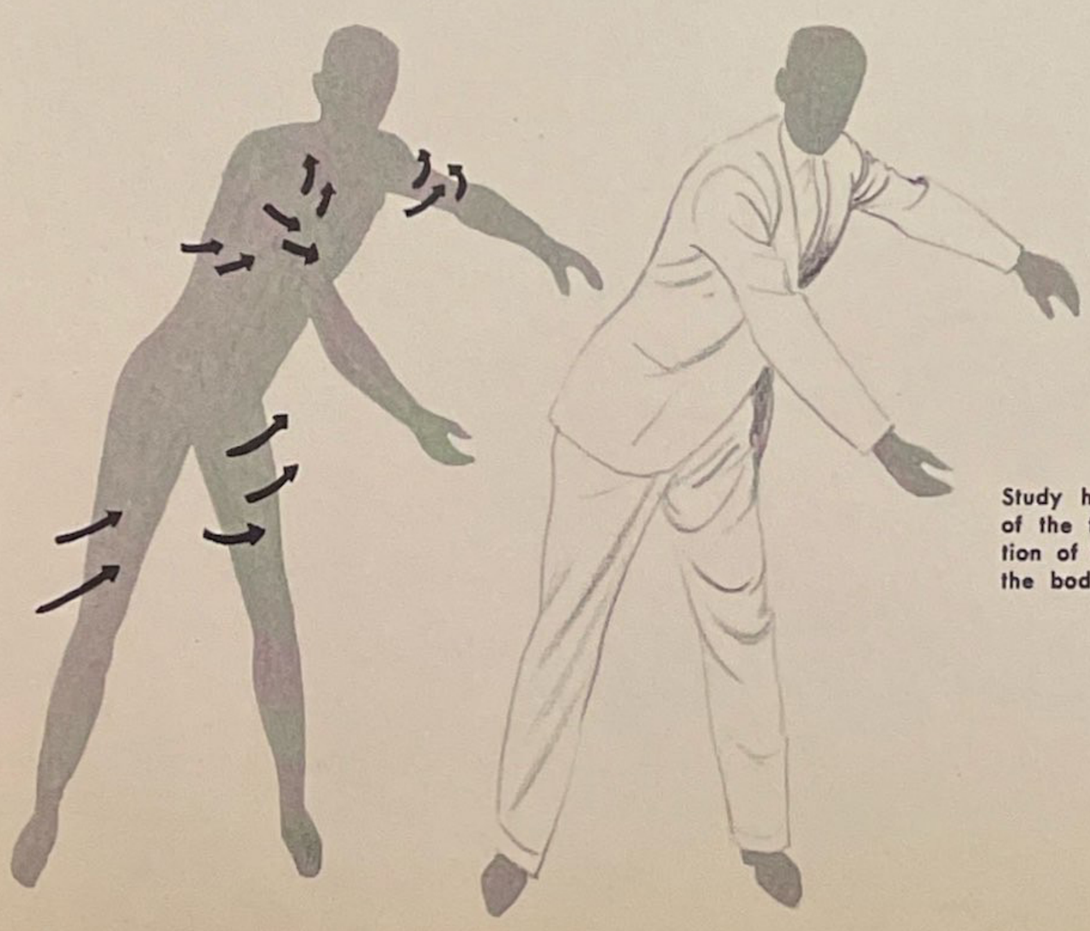
When the coat is buttoned, a group of tight condensed folds occurs at the shoulder-arm connection. They radiate in a curving direction from the shoulder to the point of tension at the button.

The condensed folds that occur at the shoulder have pulled the free edge at the cuff of the sleeve inward toward the body.



The leg slants diagonally from the hip. The outer side is the tension side, and the folds will take the direction shown by the arrows to the upper point of support at the waist. The inside edge drops away, influenced by gravity.

Folds bunch and condense on the slack side of a form opposite the tension edge.



Study here how the direction of the folds follows the direction of the twist and action of the body.

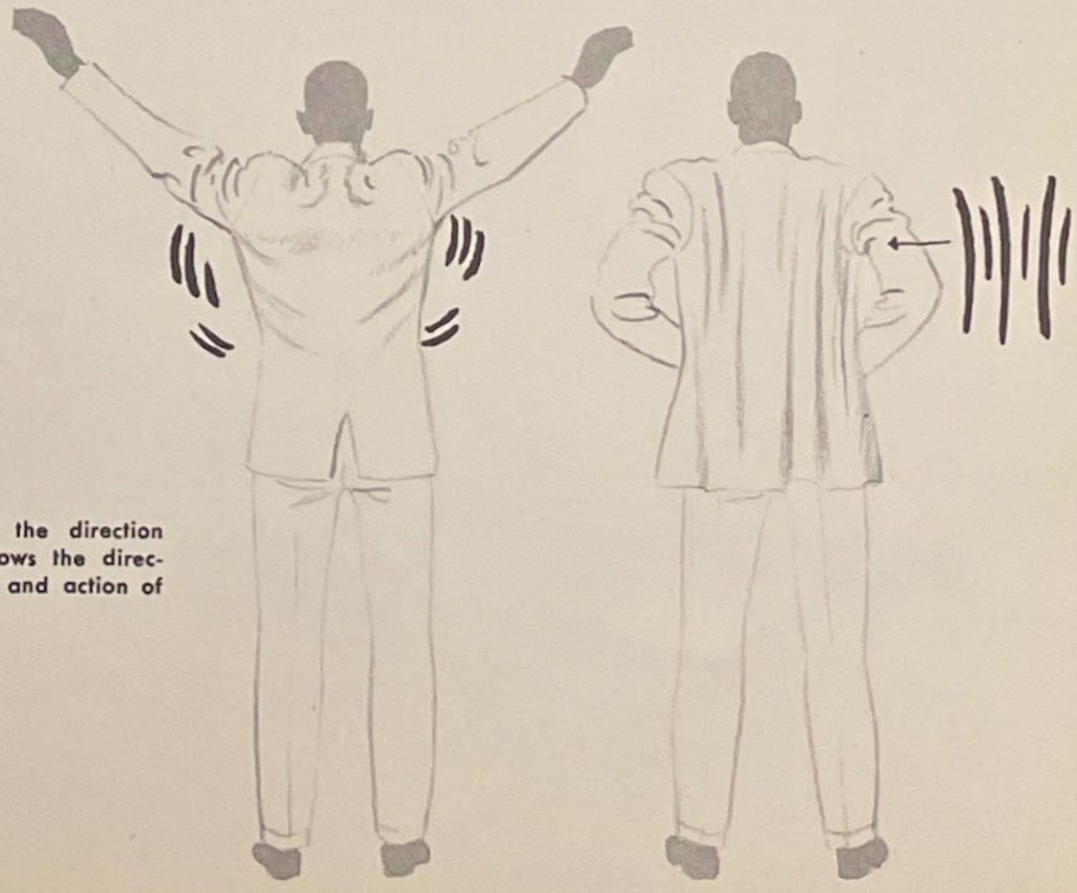
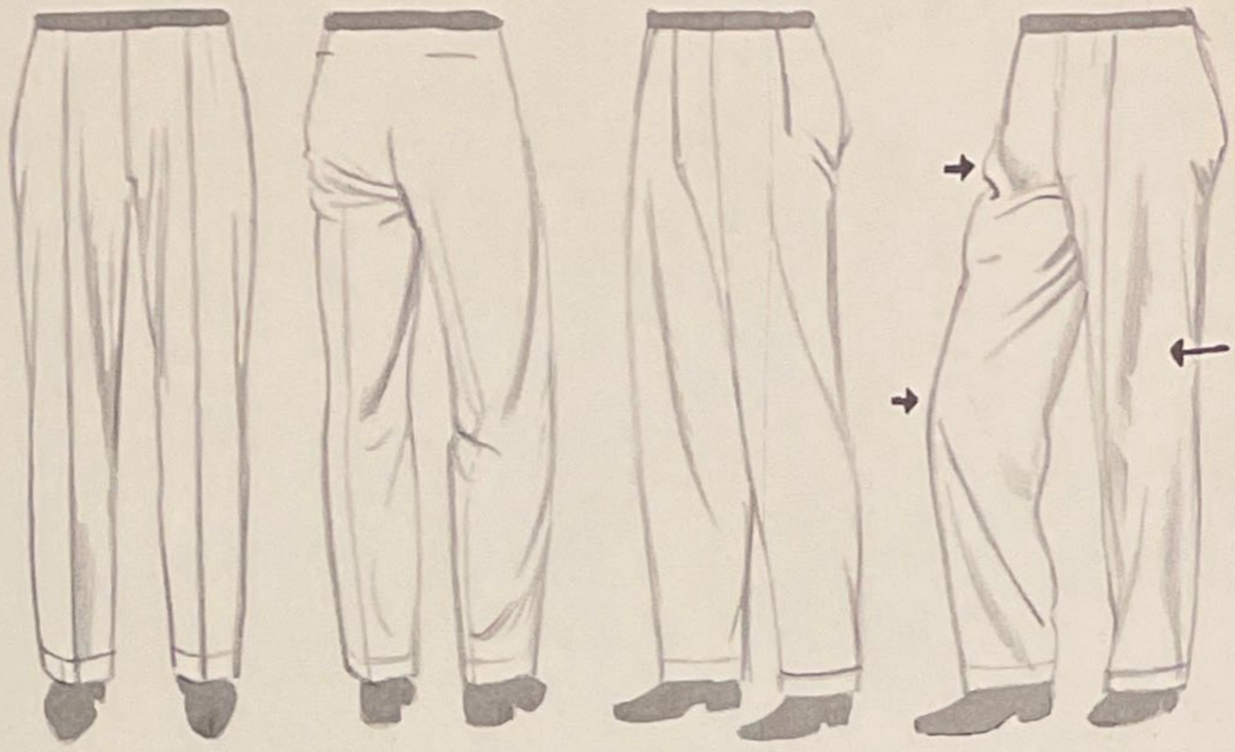


Figure in action

The trouser

The high place of support is at the waist. The greater width of the hips affects the folds because they become a radiating point of support. You must **always** think of the form that the trousers are draping or you will have no success in drawing folds. The lower body is cylindrical. Trousers are made to cover the cylinders with sufficient slack to allow freedom of action. The drape of the cloth must go around the form, **and also** obey the laws of gravity, support, tension and function.



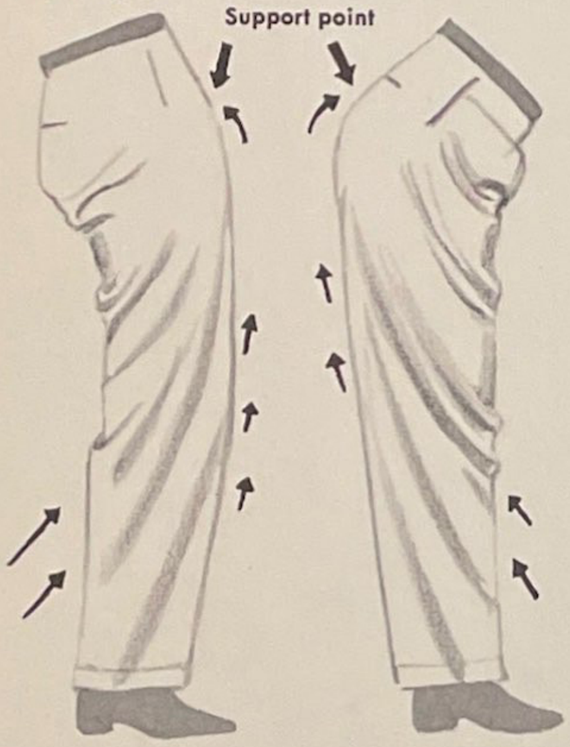
Trousers are supported at the waist, but "hang" from the hips and buttocks. The pressed seam drops straight down due to gravity. Other slight sweeping folds follow the contour of the limbs.

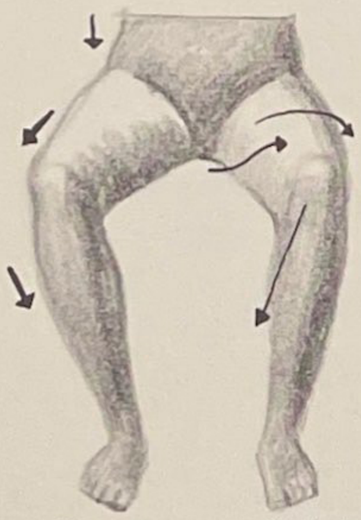
The leg on the left is straight. The other is bent at the knee. The change of direction creates half-lock folds on the under or slack side of the bent leg. Where the leg on the left joins the torso, other tight, half-locks and pipe folds occur.

The leg on the right is bent slightly back. This causes a "pull" from the support point at the waist. A long, sweeping pipe fold descends to the calf. The tension causes small spiral folds at the buttocks.

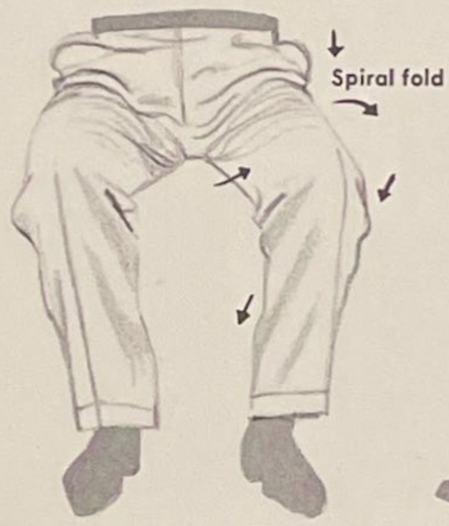
The three arrows point to the three important folds, the top ones forming as the leg starts forward, the lower ones starting where the knee changes direction, the other shows a long sweeping fold without tension.

This quickly shows the folds descending fron. the point of support to the tension edge. This causes long sweeping pipe and drop folds which designate the action of the figure.





Trousers are cut to fit the leg from the waist down with allowance for freedom of motion.

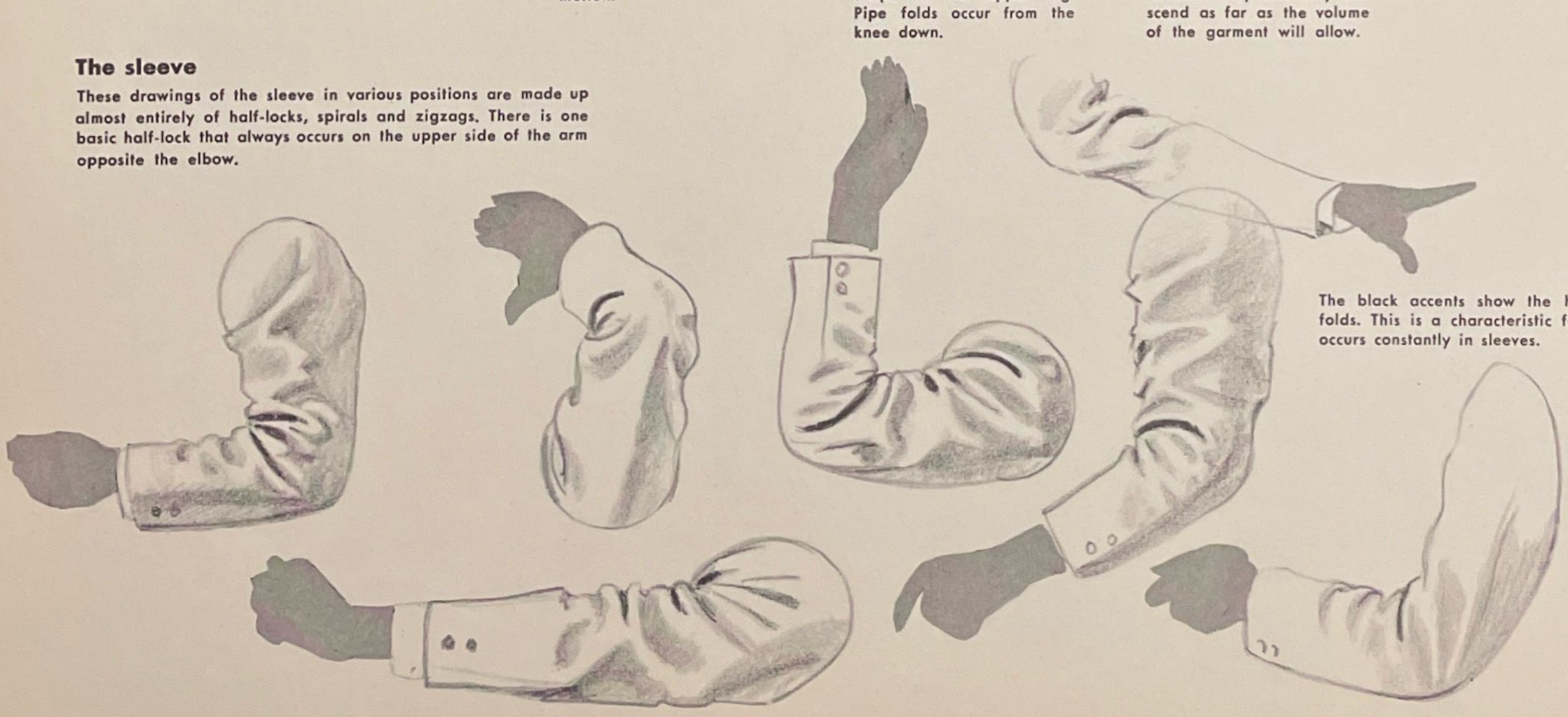


The spiral folds condense at the leg-torso connection and follow the direction and shape of the upper leg. Pipe folds occur from the knee down.

The trouser folds are pulled downward from the top side of the leg by gravity and tension. They can only descend as far as the volume of the garment will allow.

The sleeve

These drawings of the sleeve in various positions are made up almost entirely of half-locks, spirals and zigzags. There is one basic half-lock that always occurs on the upper side of the arm opposite the elbow.

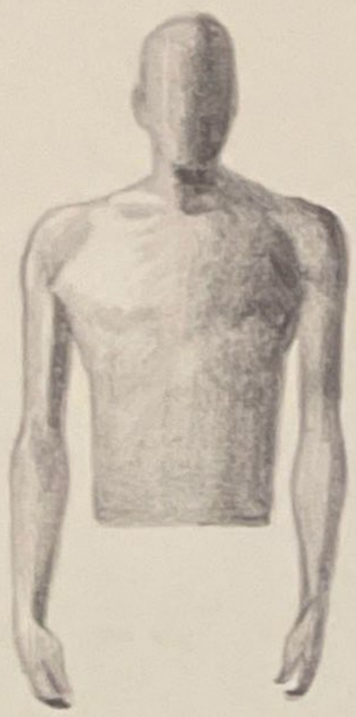


The black accents show the half-lock folds. This is a characteristic fold that occurs constantly in sleeves.

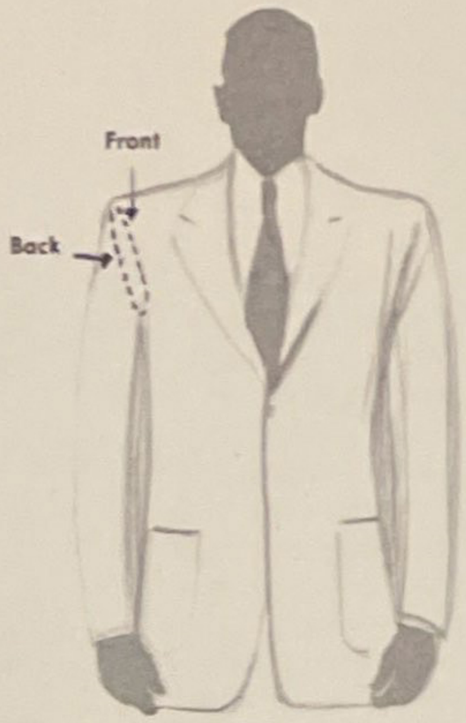
Figure in action

The coat

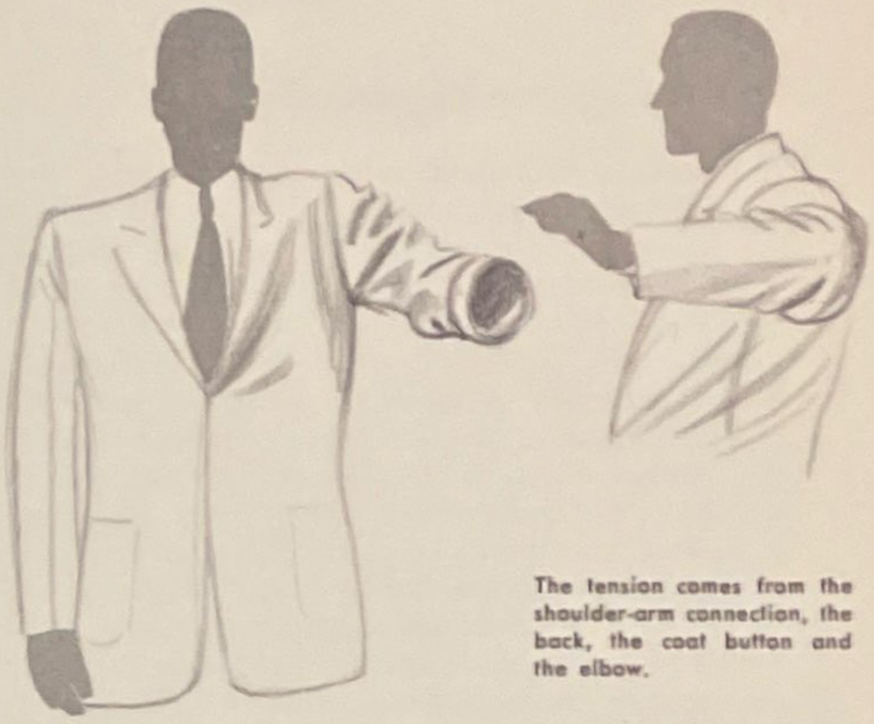
The coat or jacket is supported from the shoulders. Its range of folds is greater than the trousers, first, because of the increased action of the arms, second because it can be buttoned or unbuttoned and third because of the greater variety of garment design. The form and action of the torso and the arms must be understood to draw these folds correctly. The shoulders and arms create most of the folds because of their greater range of motion when compared to the limited range of the torso action.



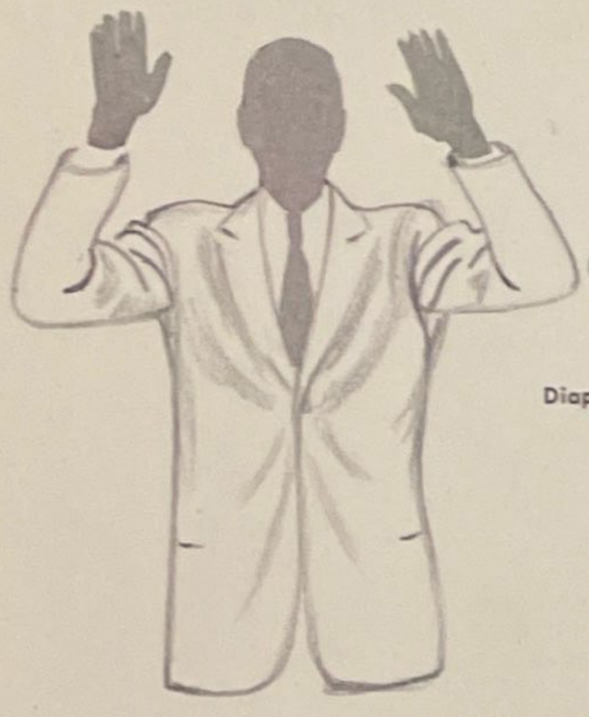
The coat is supported from the shoulders and descends with few folds. The sleeve sets into the body of the coat on an angle where the arm and shoulder join.



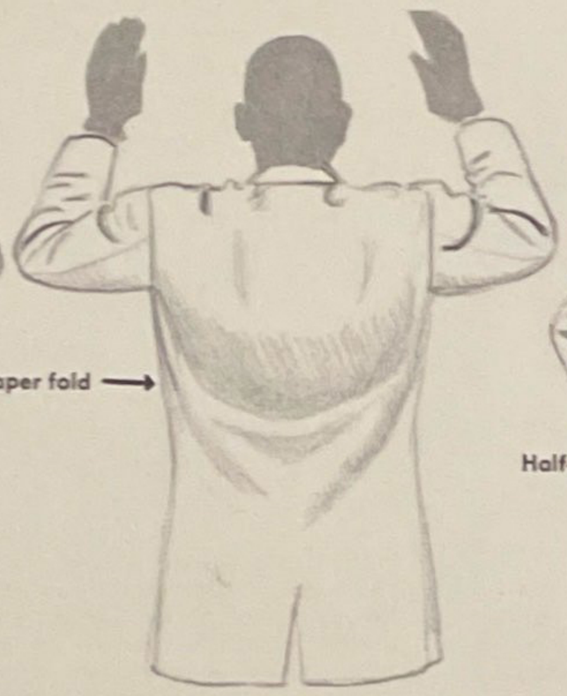
When the arm is lifted, a tension occurs on the cylindrical sleeve that condenses the folds at the armpit in spirals and half-locks.



The tension comes from the shoulder-arm connection, the back, the coat button and the elbow.



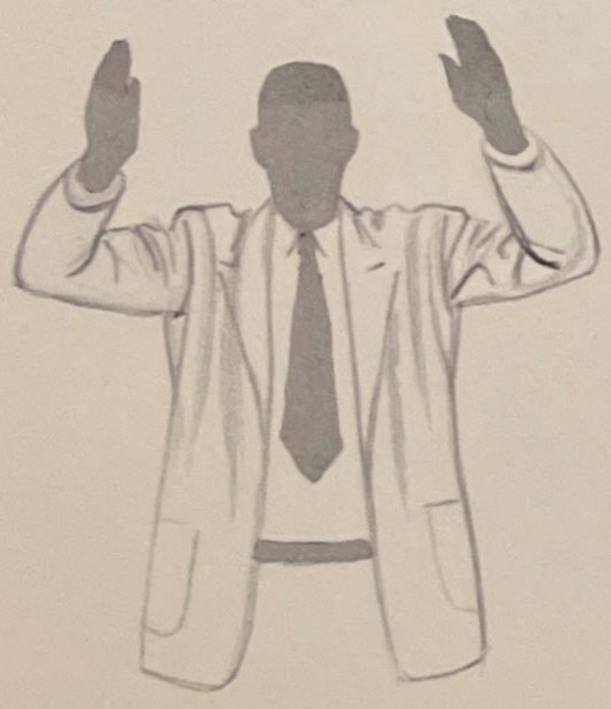
The arms raised in a buttoned coat cause folds to descend from the shoulders to the button and from the button outward toward the pockets. With arms raised, spiral folds radiate around the upper arm from the inside to the outside toward the elbow.



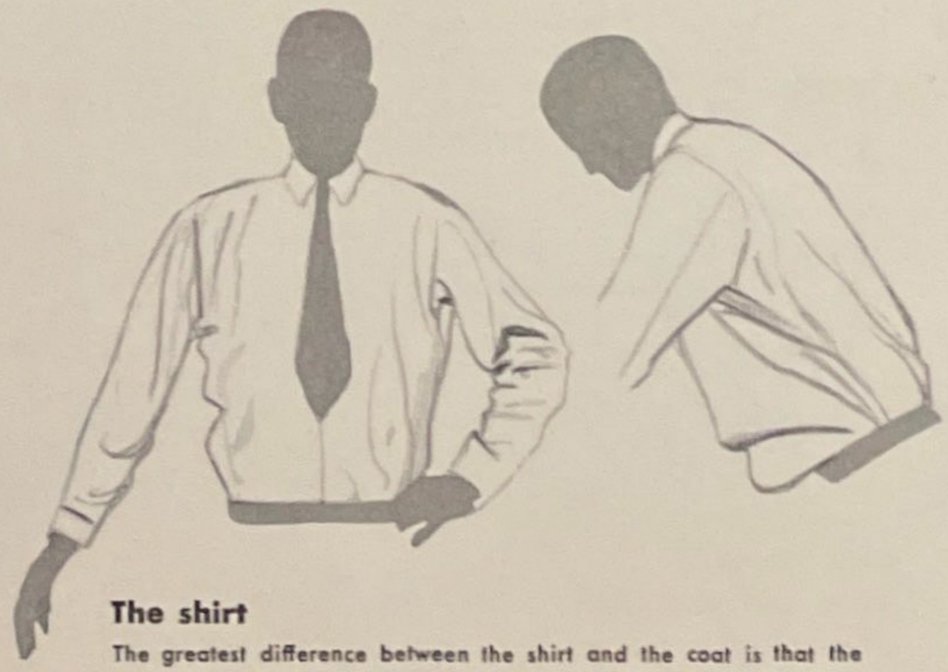
The tightness of the sleeve fitting at the armpit causes the entire coat to raise upward when the arms are lifted. This creates a group of diaper folds which cross from the two supporting shoulder points.

In this quartering view of the back, study the long sweep from the high shoulder, halfway down and across the back. This is a constantly recurring fold when an angular tension is created.

Notice the very large half-lock fold that occurs at the waist button position on the coat. This occurs because the figure is bent sideways and there is a great deal of slackness in the garment.

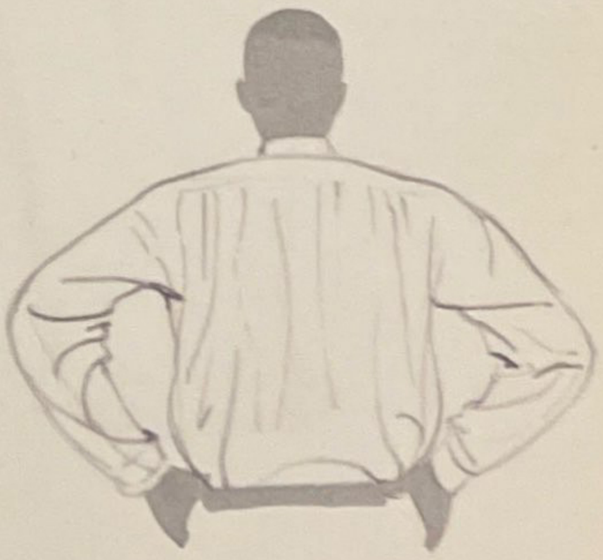


When the coat is not buttoned, the folds taper out toward the bottom in a free sweep from the shoulders.



The shirt

The greatest difference between the shirt and the coat is that the shirt is held rigid at the waist. The shirt is full and contains drop folds and pipe folds of great variety radiating from the waist to the shoulders. They vary in character in relation to the degree of tension present. A twist of the body will sometimes give them a tight spiral character, while a relaxed attitude, will create numerous diaper folds.



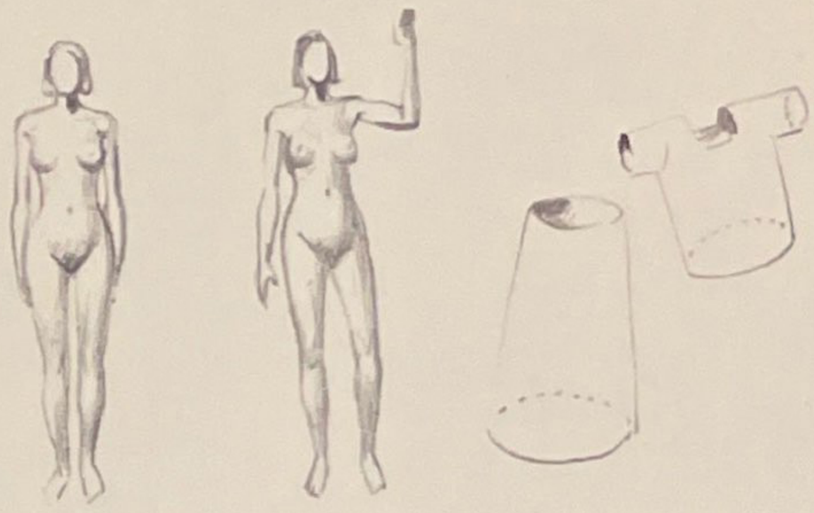
Because shirts have a yoke across the shoulders, folds descend from the yoke to the waist rather than from the top of the shoulders. These are pipe folds and drop folds. A change of tension caused by the lifting of the arms will change them to diaper folds.

Figure in action

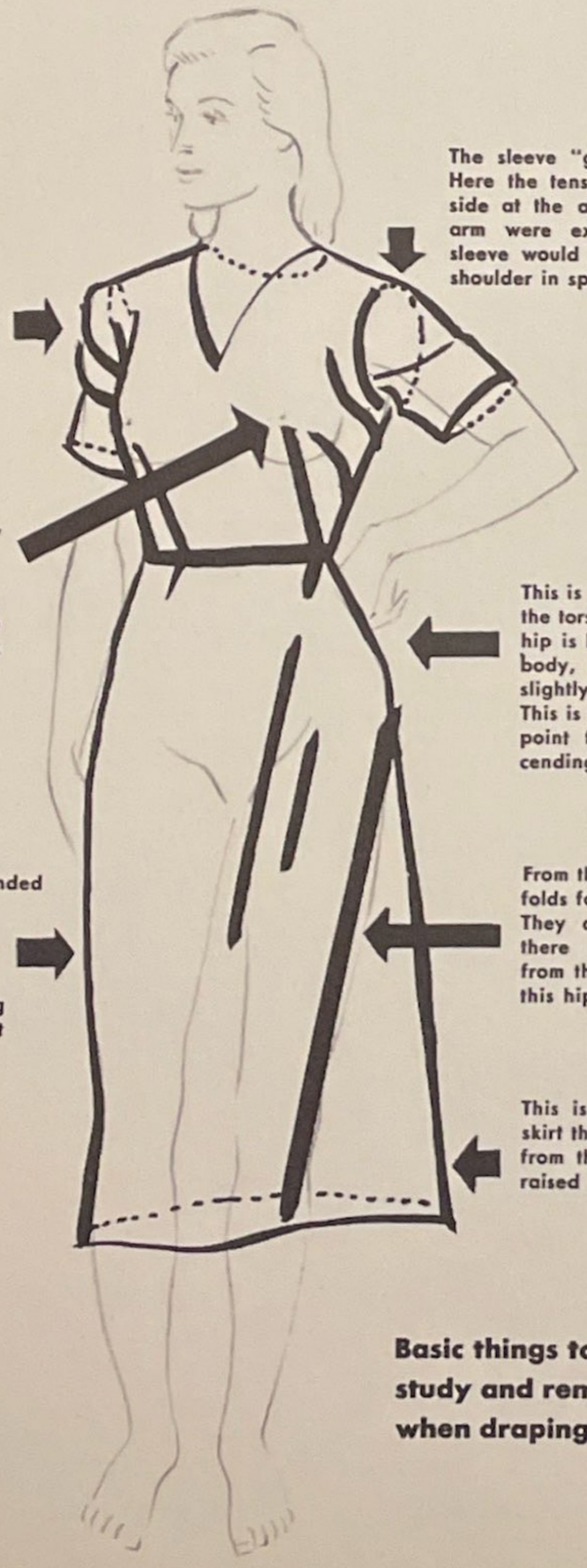
Draping the female figure

Regardless of the wide range of cut and style in women's clothes, there are fundamentals that cannot be changed. A dress is supported from the shoulders, extends out over the bust and descends due to gravity in drop and pipe folds to its hem. It may be gathered at the waist and fall from the bust to the waist, to the hips – and then descend. Or it may be a separate blouse and a skirt. The skirt extends out from the waist and falls due to gravity from the point of largest circumference at the hips. This is traditionally a female costume, just as a man's costume is a coat, trousers and shirt.

Because of the variety in female clothing you should always sketch in the form of the figure first, *and then drape the form.* This gives you something to build on. It will be much easier for you to find the different points of tension and support and have the folds correct if you draw the figure first. The variety of volumes of cloth in different cuts of female garments makes this procedure necessary. Always follow the fold "through." That is, draw it completely around from start to finish by drawing its volume, its depth and its contour. When you do this, the fold that is controlled by tension will follow the form. Those controlled by gravity will find the protruding edge and descend.



The Form – The Action – The Garment
You must remember these three things to drape the figure correctly.



When the arm is straight down, the folds spiral from the armpit forward around and up toward the outside point of the shoulder.

The sleeve "goes around" the arm. Here the tension is from the underside at the armpit. If, however, the arm were extended vertically, the sleeve would drop down toward the shoulder in spiral and half-lock folds.

On the female figure, the protruding busts create tension and a radiating point for folds. They radiate to the shoulder, the back and to the waist, or in a loose garment descend downward toward the hem at the bottom.

This is the point of support for the torso from the waist as this hip is higher and supports the body, the other leg being slightly extended and relaxed. This is the tension and support point for the diagonal, descending folds.

The relaxed leg extended slightly forward becomes a light point of tension and influences the angle of the folds, radiating from the high support point at the hips.

From the hip, large descending folds follow the line of the leg. They cannot fall straight as there is a tension running from the opposite lower leg to this hip.

This is the slack area of the skirt that swings down and out from the support point of the raised hip.

Basic things to study and remember when draping a figure

If this simple garment were placed on a figure, it would hang straight—as shown at the right. Below, we show it gathered at the waist, which has caused the cloth to condense into pipe folds and puts a tension over the bust. Below and to the right, the figure has moved, with legs apart and the figure slightly bent back. In this stance the cloth drops from the bust over the stomach and falls between the legs. Study the outlined figure beneath and also follow the dotted line which shows the contour and volume of the bottom of the skirt.

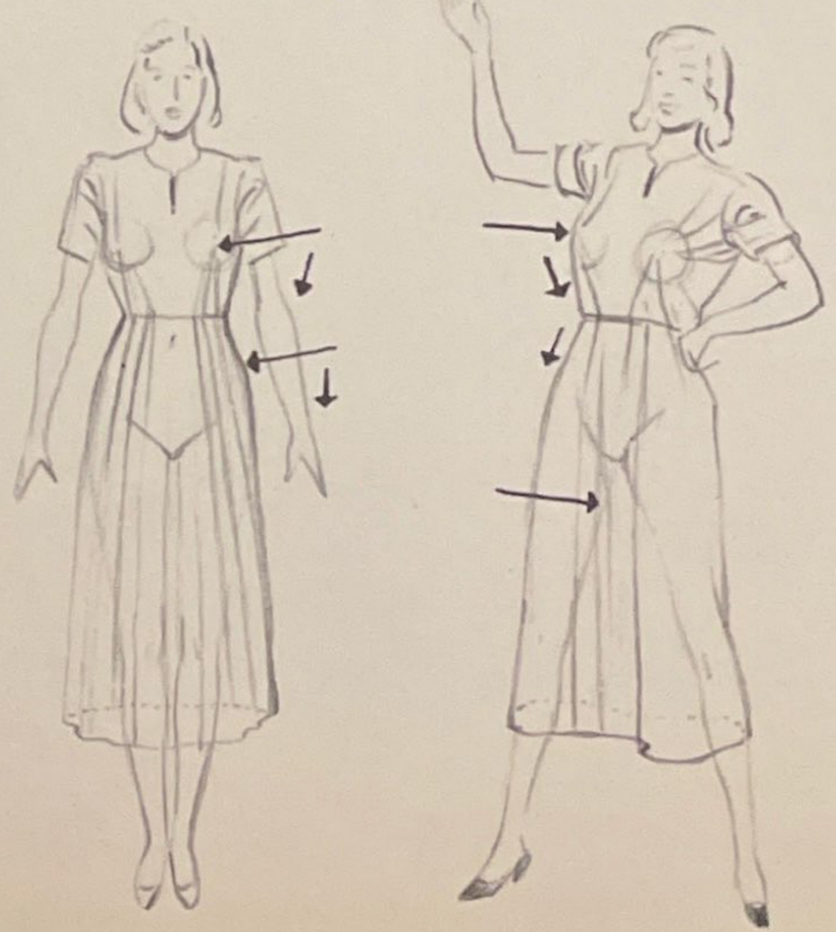
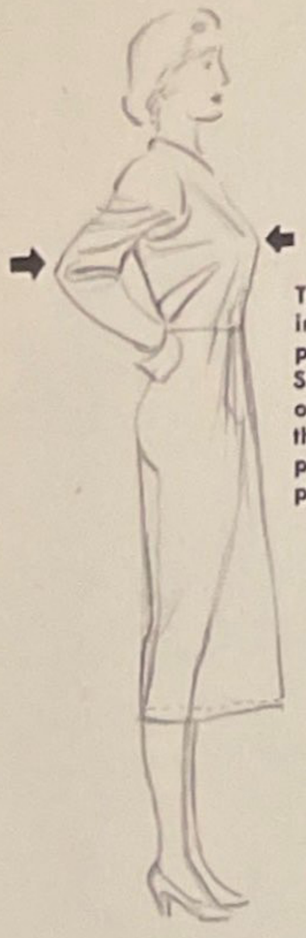
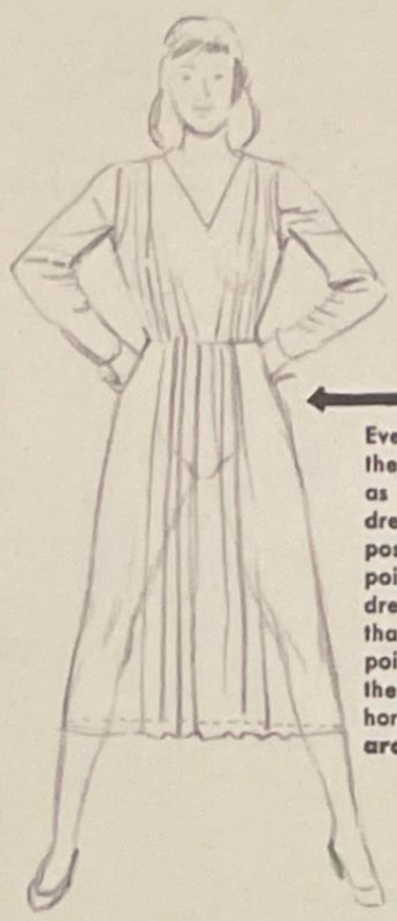


Figure in action

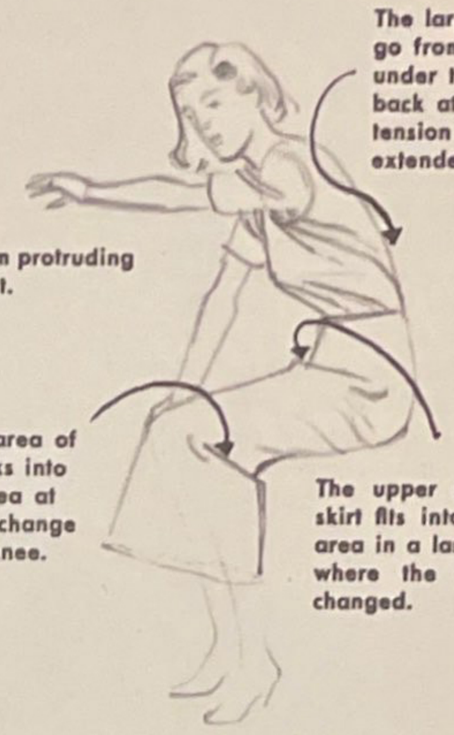


The two arrows indicate the two points of tension. Study the direction of the folds, from their fixed support points to the points of tension.



Even with legs extended the folds fall by gravity as shown on the loose dress at the left. In this posture the tension points on a tight dress are stronger than the support points. This causes the folds to go in a horizontal direction **around the form.**

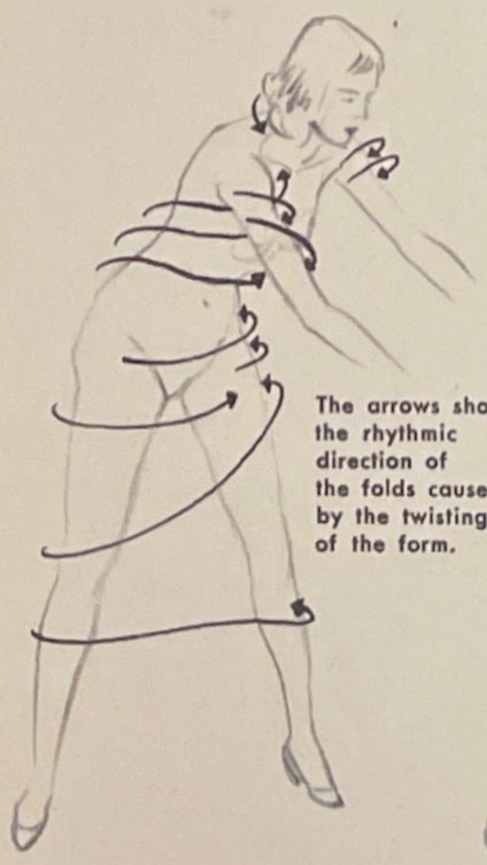
The tension is from protruding busts to the waist.



The large tight folds go from the shoulder, under the arm, to the back at the waist. The tension is against the extended arm.

The middle area of the skirt locks into the lower area at the direction change behind the knee.

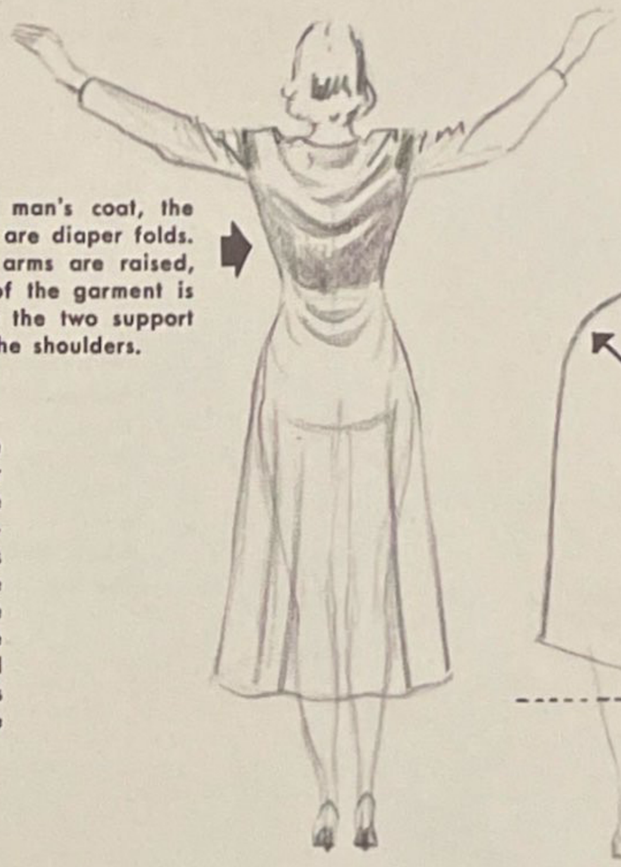
The upper area of the skirt fits into the middle area in a large lock fold where the direction is changed.

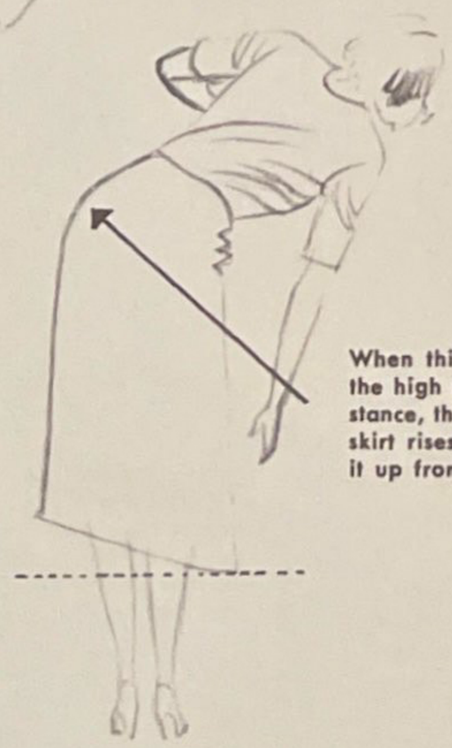


The arrows show the rhythmic direction of the folds caused by the twisting of the form.

All of the tension points are under strain. On the upper torso, the folds go from the back, up and under the extended arms. The strain is also from the back to the point of the bust. Because the legs are extended the folds are more horizontal since the strong tension is from the outside edge of the legs.

As in the man's coat, the back folds are diaper folds. When the arms are raised, the slack of the garment is created by the two support points at the shoulders.





When this becomes the high point in a stance, this side of the skirt rises, which lifts it up from the floor.

The suit

In the jacket, the folds are similar to those in a man's coat, with the exception of the extended bust. In figure 1, notice that the folds on the upper arms are "soft" folds without much strain, showing a generous amount of cloth from elbow to shoulder. The skirts on all three figures are creating long folds from hip to knee. The weight in each case is on the right leg, with the left knee extended. You will see that this makes a slight difference in the edge of the folds because each skirt is cut slightly different. In figure 3, the side view shows a long fold coming from the waist, following the contour of the leg. This is caused by tension created at the waist as the figure bends slightly back.

1

2

3

We have drawn in the lower part of the figure to show you the direction and fall of the folds over this part of the form. The folds in the jacket are tight because the figure is bent far over, creating a tension from the under arms and over the bust.

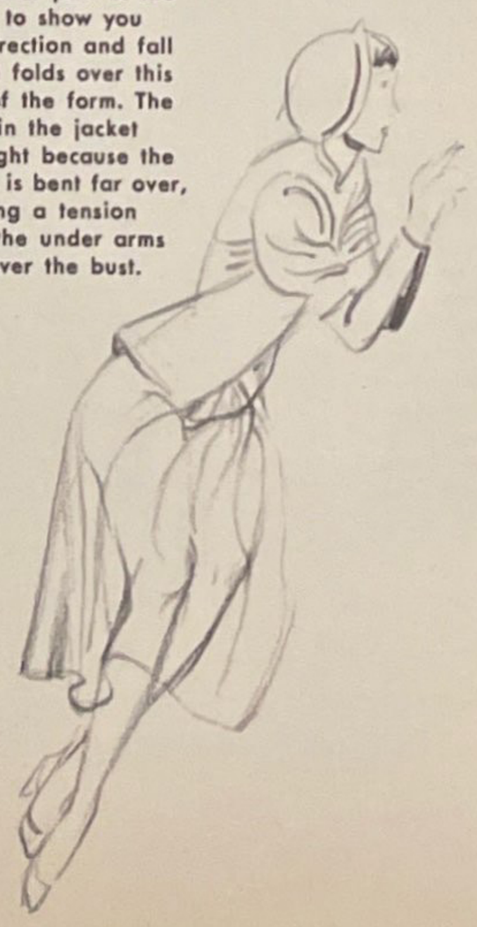


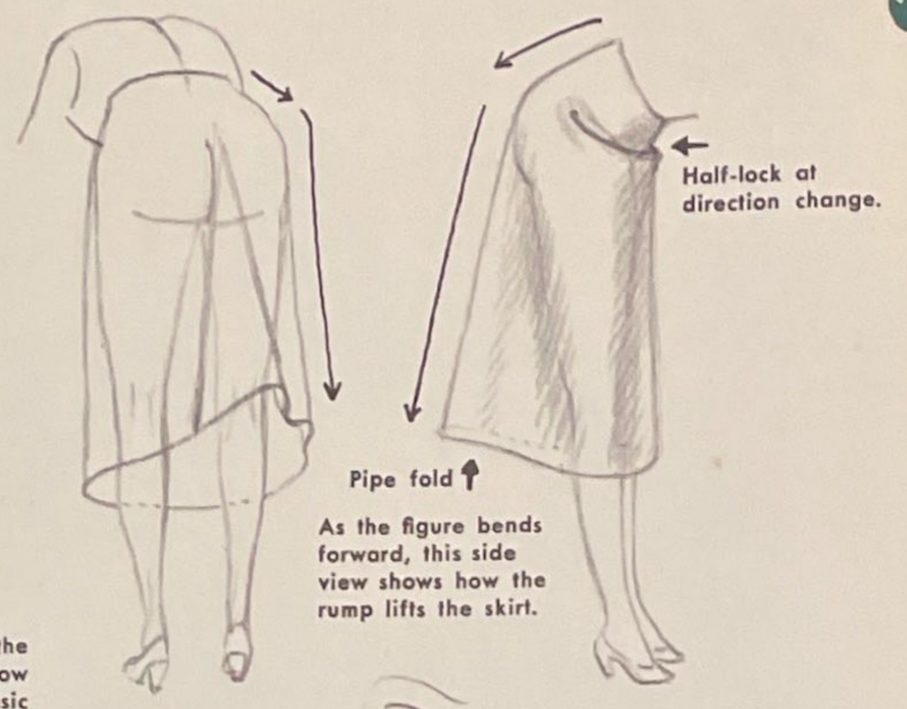
Figure in action

The skirt

Basically, the skirt is a cylindrical piece of cloth, narrower at the waist than at the hem. It must accommodate the lower portion of the figure. If you will study the diagram at the right, you will see how the form looks below the skirt. You must always be conscious of this underlying form, as it governs all the folds of the skirt through the action and stance of the figure.

By showing the figure inside the skirt, you can study the points of support and tension. The two long arrows show that the skirt is the same length on both sides. The basic points of tension here are at the knee of the extended leg and the hip. This creates a long, sweeping diaper fold from knee to hip in the slack area of the skirt.

As the figure leans over, the skirt lies flat on the rump for a short distance before it descends. This forward extension of the torso has caused the skirt to raise in the back. Usually one or two large pipe folds drop from the protruding edges at the buttocks.

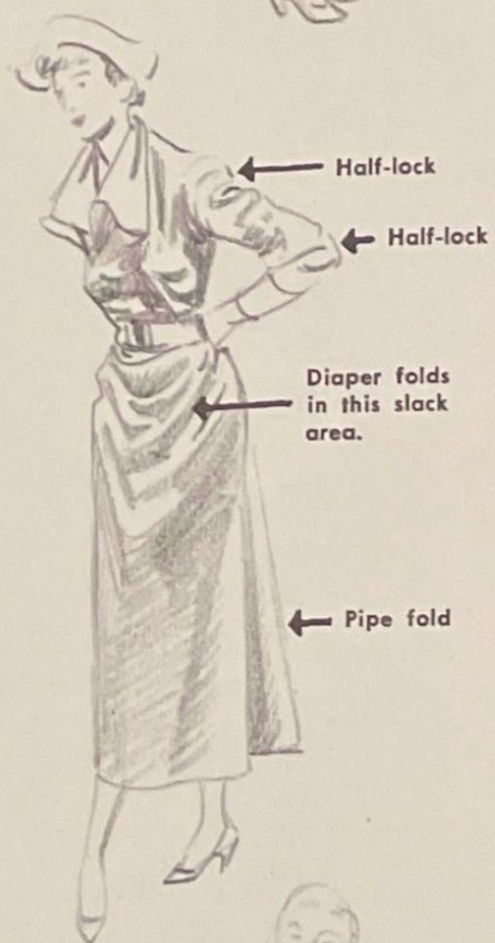


By studying the underlying figure you can see how these protruding edges affect the folds.

As the hand lifts this full skirt, several large diaper folds occur. The points of support are the hands, the hips and the waist.

The dress

Our chief concern is in the basic pattern of a dress — that is, those with tight or loose bodices and full or tight skirts. Most dresses fall into a combination of these basic designs. Different types of folds occur when the bodice is loose, as compared to one that is tight. This change demands careful study, as it will show how the degree of tension affects the character of the folds. This applies to either the skirt or the bodice. Below we show the basic types. Study the differences in folds between the tight and loose garments.



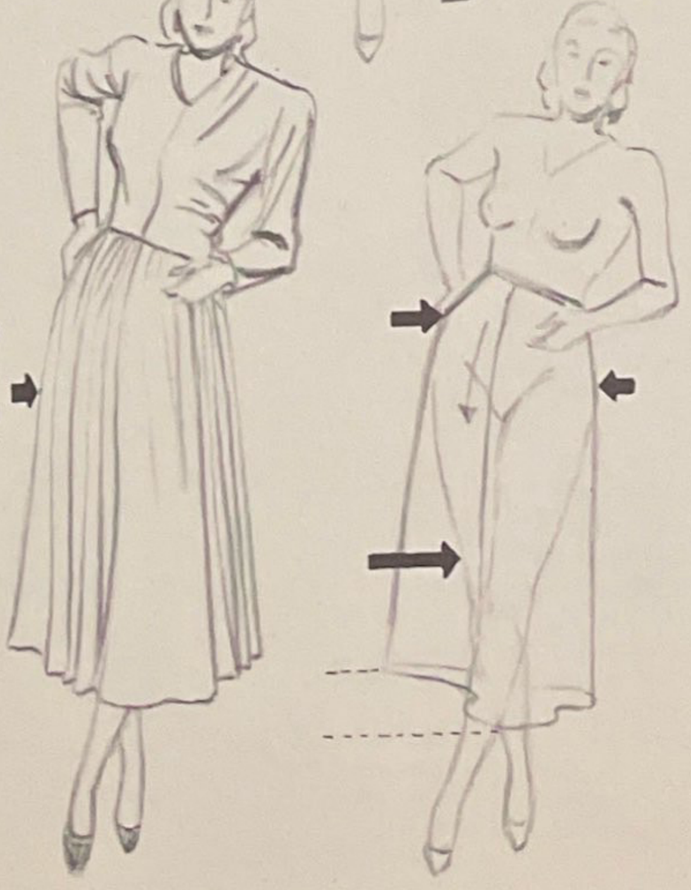
This shows a fitted dress with a reasonably full skirt. By cutting the garment to fit the bodice, points of tension are reduced to a minimum. From the point at the waist the dress fits out over the hips and the looseness of the skirt from there to the hem causes most of the folds in this type of garment, with the exception of those occuring around the arm-shoulder connection at the sleeve.

Pipe folds from the shoulder to the point of the bust down to the waist, and from this point also down around, toward the back at the waist.

The tight dress shows the many points of tension quickly because it hugs the form. This causes endless small folds radiating from the tension points

The dress is fitted at the waist. The skirt has four, large pipe folds caused by the design of the skirt. Contrast this with the gathered, pleated skirt on the figure at the right.

A very full skirt made of soft material gathered at the waist will fall into numerous pipe folds.

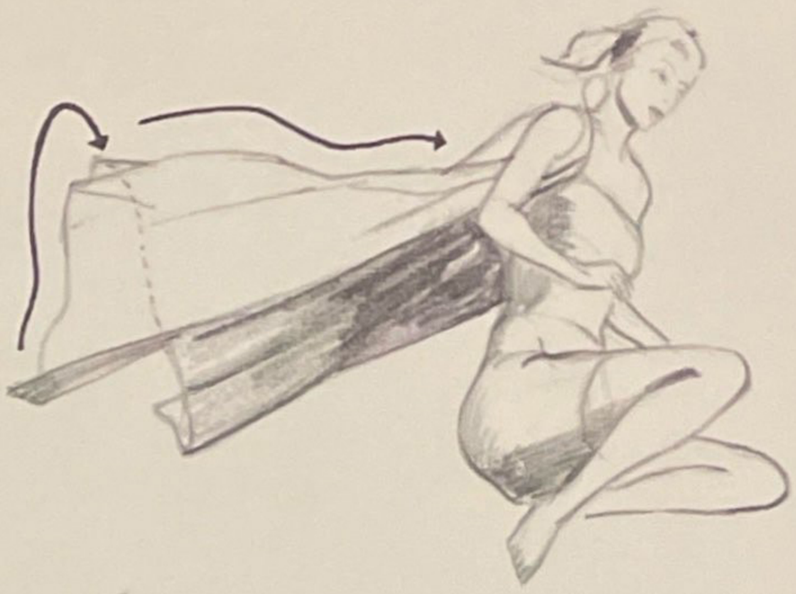


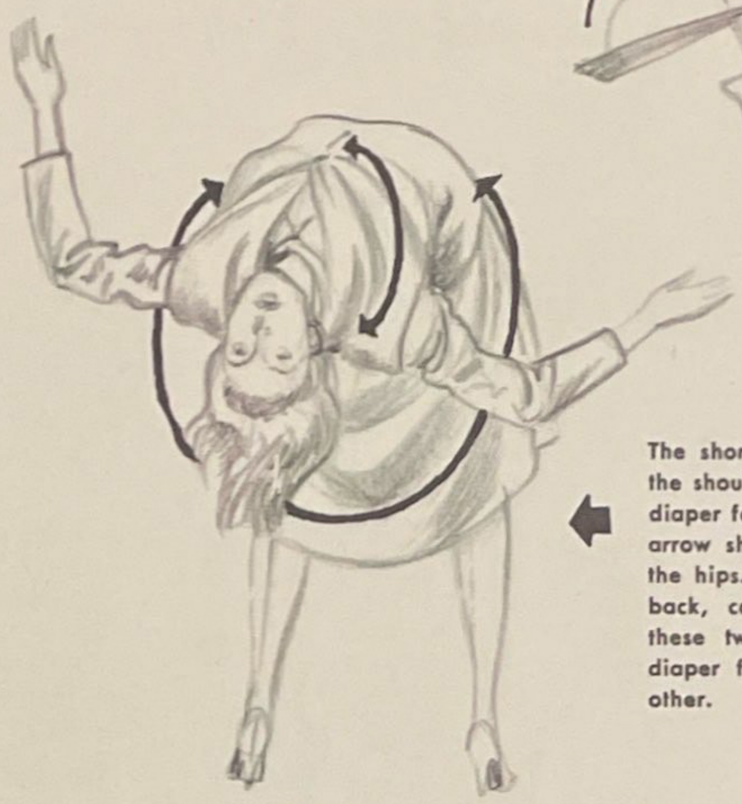
The stance of a figure changes the behavior of the folds. If the hips are on an angle, the high hip will pull that side of the skirt up. If the skirt is tight, diagonal folds will occur from the high hip toward the outer leg. In a full skirt, as pictured above, there is little tension because of the fullness, and the folds fall directly down.

Figure in action

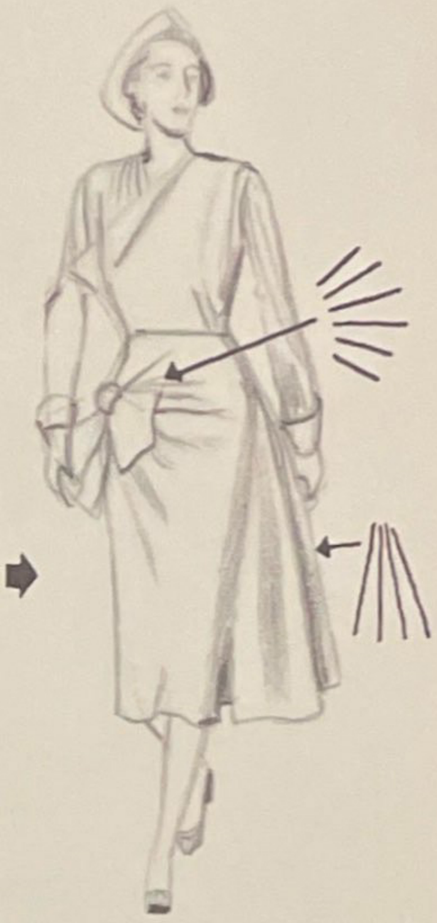
Women's clothes in motion are impossible to draw without the **most careful study of the garment.** The variety of styles and designs of the different units, such as the cut of the sleeve or the fullness of the jacket and skirt, makes this study absolutely necessary. The basic points of strain remain, but the particular garment will behave in its own particular manner. The rule to follow is to **establish the points of tension and support** on the nude figure. Then fit the garment to the figure and estimate the degree of motion so that the slack area falls away from the tension and support points, **in keeping with the estimated motion.** When you draw the folds radiating from these correct tension and support points, be sure to maintain the angle and direction of the folds in relation to the intensity of the motion.

This robe is cut narrower at the shoulders than at the hem. As it moves horizontally in the wind, it takes a wide sweeping curve at the hem. Its tension point at the arm-shoulder connection controls the entire shape of the garment as it recedes.





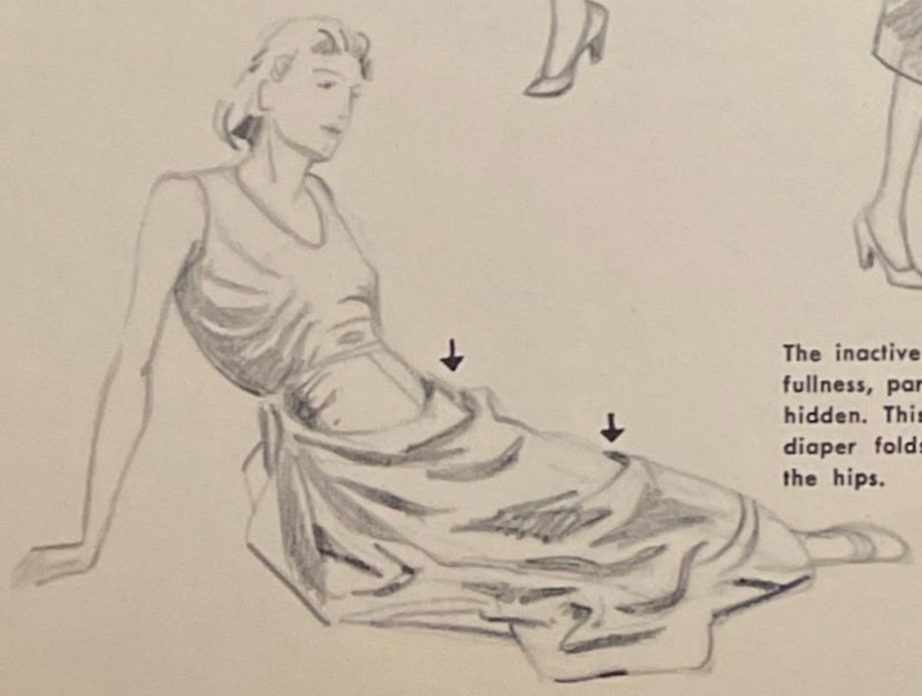
The short arrow shows the tension from the shoulder to the button, causing small diaper folds on the upper chest. The long arrow shows the **two** support points at the hips. As the skirt drops down at the back, caused by this bending figure, these two support points create large diaper folds to sweep from one to the other.



A loose cut coat, such as this, falls back and away from the direction of the action in several large pipe folds. The control of the folds is from the top of the shoulders, forward, then down and under the armpits, as shown by the arrow and dotted line.

The major folds in this dress are caused by the style of the garment, rather than by the action of the figure. Tight folds occur at the gathering of the cloth on one hip. Due to the influence of gravity, the long pipe folds descend from the other hip where there is a surplus of cloth that is not under tension.

A side view of the skirt shows how the skirt "works up" as the leg thrusts forward. A group of folds occur in the slack area. They are caused by the cloth moving up and descending diagonally back and away from the tension. They follow the contour of the leg. A group of zigzag folds occur opposite the crooked arrow in the slack area near the leg-torso connection.

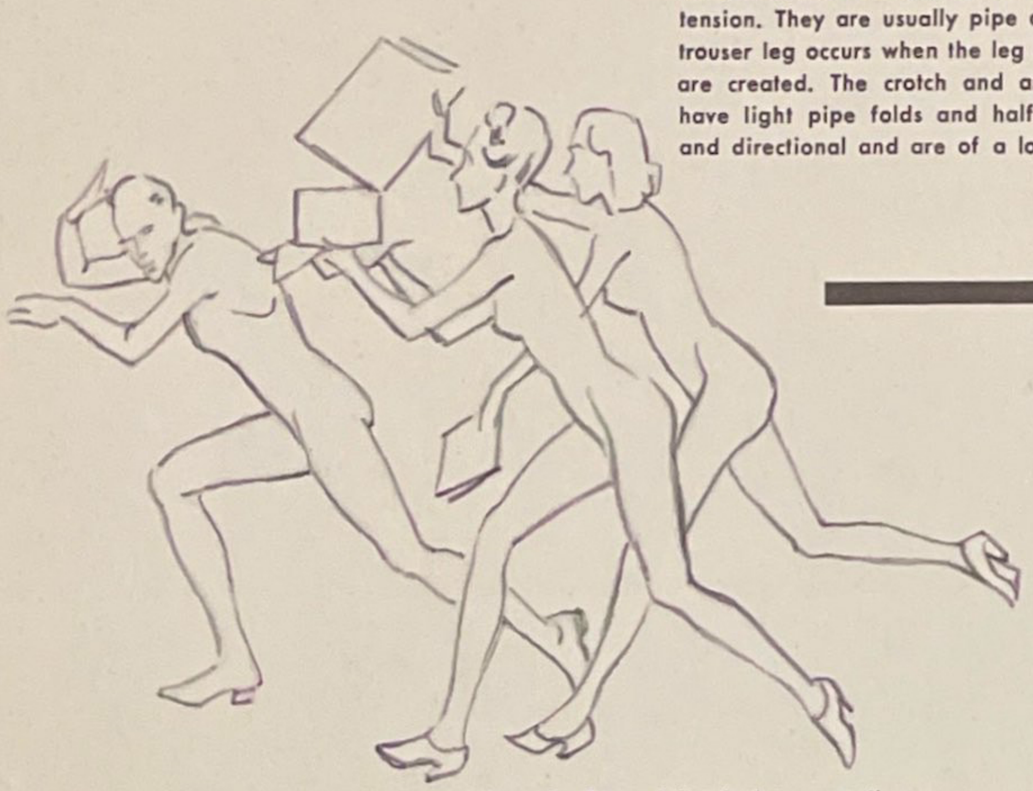


The inactive skirt is inert. Because of its fullness, part of the form of the legs is hidden. This fullness has caused a few diaper folds from the slight tension at the hips.

This illustrates how pipe folds follow the form of the figure. There is some slack cloth here and many folds, but the form of the figure predominates.

Figure in action

When a figure is moving rapidly forward, the front of the body, the arms and the legs, become a wall of tension. The direction of all folds is back, down and away from the forward edge of the wall of tension. They are usually pipe or drop folds. Where the slack of a trouser leg occurs when the leg is lifted, diaper folds and half-locks are created. The crotch and arm-shoulder connection continue to have light pipe folds and half-locks. All other folds are rhythmic and directional and are of a loose-flowing nature.



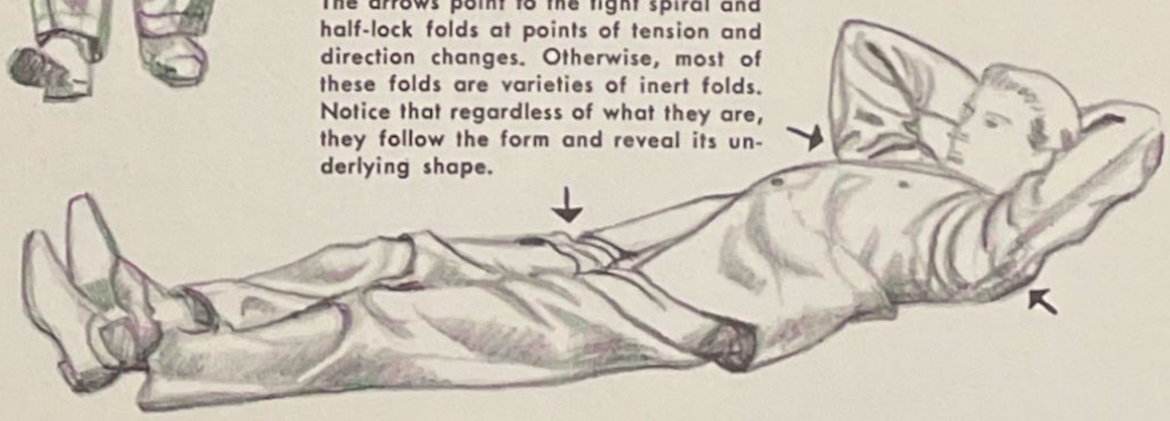
When the figure falls, slack areas trail away from the direction of motion. Half-locks will occur at points of direction changes in the form. But the over-all direction of most folds is long and flowing. It is the same action in the folds that occurs when you are standing in a strong wind.

The forward leg will gather soft half-locks and spiral folds as it moves forward. This is caused by the cloth being "thrown" slightly ahead of the leg proper. The back leg will carry a long sweeping pipe fold starting at the front of the waist and flowing in a curve toward the foot. The tension is on the front of the forward leg, and the back of the trailing leg.

A kneeling, reaching figure, as shown, produces a strain that radiates spiral pipe folds from the forearm to the center of the back. The arm-shoulder connection is the key point. The arm folds radiate to it. The torso folds come from the shoulder, go under the arm, around the chest and down to the back.

The reaching arm and the torso bent at the waist do two things. First, the tension around the arm causes radiating spiral folds. Second, the large, half-lock folds occur where the slack of the coat meets the upper leg as the torso bends down. The back has small tight folds caused by the contrasting horizontal tension.

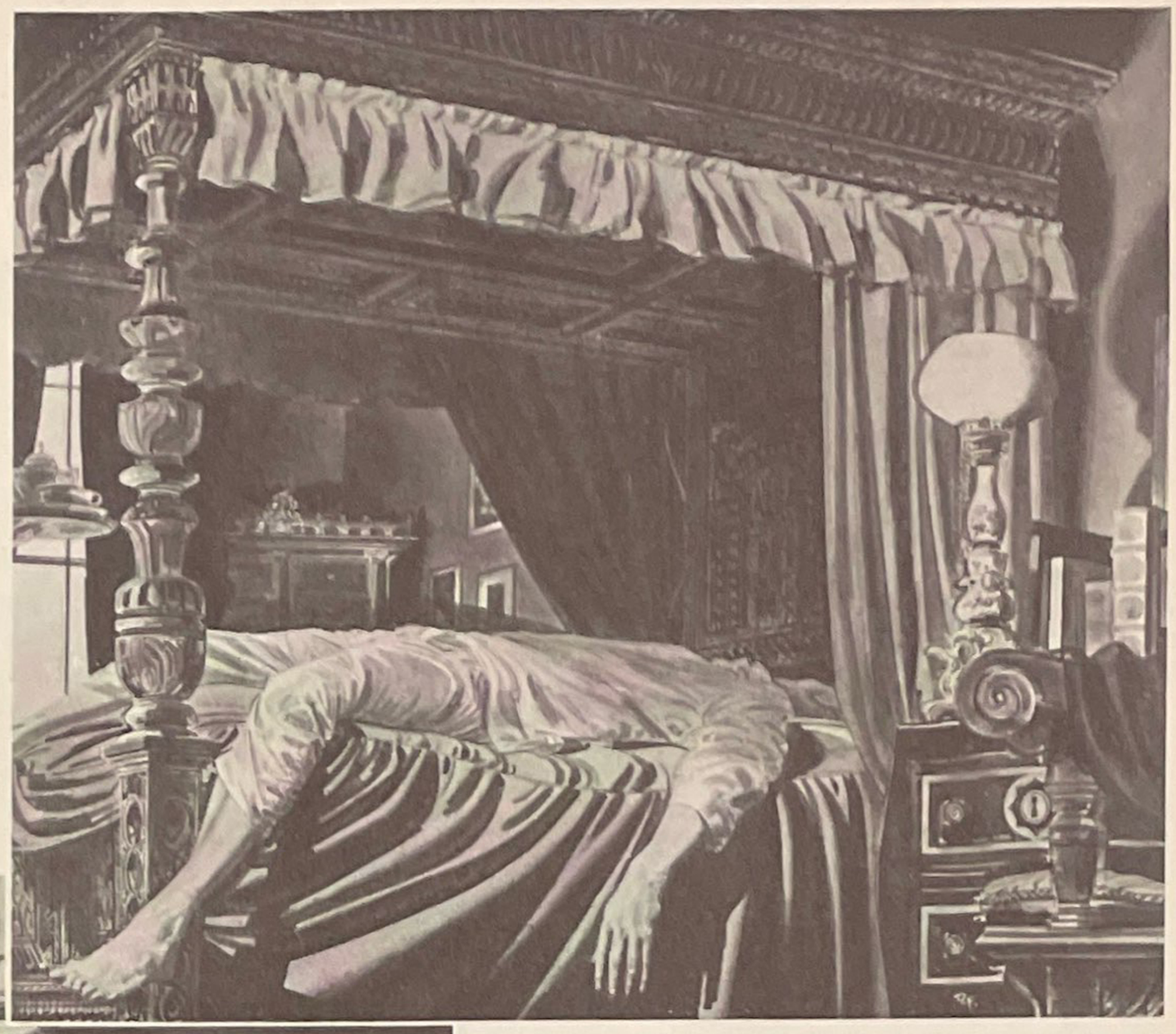
The arrows point to the tight spiral and half-lock folds at points of tension and direction changes. Otherwise, most of these folds are varieties of inert folds. Notice that regardless of what they are, they follow the form and reveal its underlying shape.



Drapery in motion

The most important thing to remember, and this is a *MUST*, *is that the nude figure has to be drawn first and then draped,* or you cannot draw convincing folds on a figure in motion. All of the drawings on this page started with a nude figure. *Careful study of the garment is also a must.* The shape and fullness of the jacket and the position and connection of the sleeve at the shoulder control most of the upper torso folds. The cut and fullness of the trousers, paying particular attention to the leg-torso connection, is the important controlling point for the trousers. The trousers behave differently in different actions. Sometimes the slack is thrust upward, caused by certain leg motion — at other times it is under tension. This requires observation, study and practice.

Figure in action



Interpretation

In these pictures, all by Robert Fawcett, study how the artist used the drapery to help characterize the situation. In the drawing in the upper left, notice the difference in the character of the drapery *behind* the figure and the drapery *on* the figure. Each has a different function that has been carefully considered in planning the picture. The picture directly above shows a rhythmic motion in the bed covering, all folds radiating from a point under the prostrate figure. The folds on the figure itself show clearly the solidity of the underlying form and are of a different nature from those of the bed cover. To the left, the sleeping Mexican has folds born of use, and the irregularity of the folds is drawn consistent with the attitude of the figure and the character of the light-weight cotton garment.

Summary

Good drawing is good thinking. Observation, study and analysis are necessary to correctly draw drapery. You must first *understand the form that is to be draped.* We recommend that you *always draw the form first,* then study the tension and support points of the form as you visualize it draped. These points will vary in the type of drape, so you must consider the tension and support points in relation to the design or cut of the garment. Careful thinking is required to draw the draped figure in its many attitudes and actions. It is chiefly a study of tensions. None of these requirements is difficult if you thoroughly understand the form. *REMEMBER* – the laws of folds are known by the following names:

Pipe, Zigzag, Spiral, Diaper, Half-lock, Drop, and Inert

They are governed by:

GRAVITY – SUPPORT and TENSION – FUNCTION

Al Parker in his studio at Westport, Connecticut, painting this special demonstration of the figure in action. The model is a young lady chosen from a local school of ballet.

Painting figures in motion by – a parker

I have tried to construct this demonstration sketch with simplicity, developing a figure in subtle motion on the gesso surface without pursuing slick mannerisms. With one exception, all the diagrams on these pages were made before I started to paint. They are presented in the order I created them, to show my thinking on the preliminary stages. They do not represent a post mortem.

These pages may give the impression of much calculation. This is partly true. Much planning is used as a starting point, a basic construction on which I can later improvise, but never at the expense of the organized foundation. I do not ignore accepted conventions of balance, but since I paint mostly from intuition I find all formulae difficult to abide by and I do not believe you should be bothered with them. This demonstration is an honest portrayal of how I work. The impression I wish to impart is a thought-provoking one, from which you may evolve your own method of procedure.

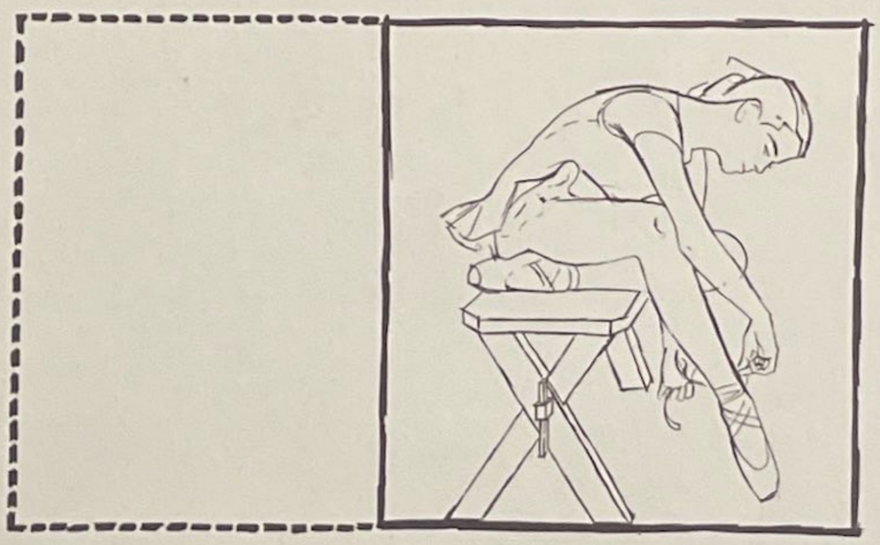
A painting is composed of so many important parts — composition, motion, drawing, color, imagination, etc. None of these parts should emerge as the subject matter, least of all any technical inventions. Do not be dejected if your work lacks a polish of technical virtuosity. Bear down on the other parts. Skill at controlling your medium will come naturally while your brush is painting away, solving other more important problems.

Our problem now is one of motion. I have chosen a ballet dancer as my subject matter.

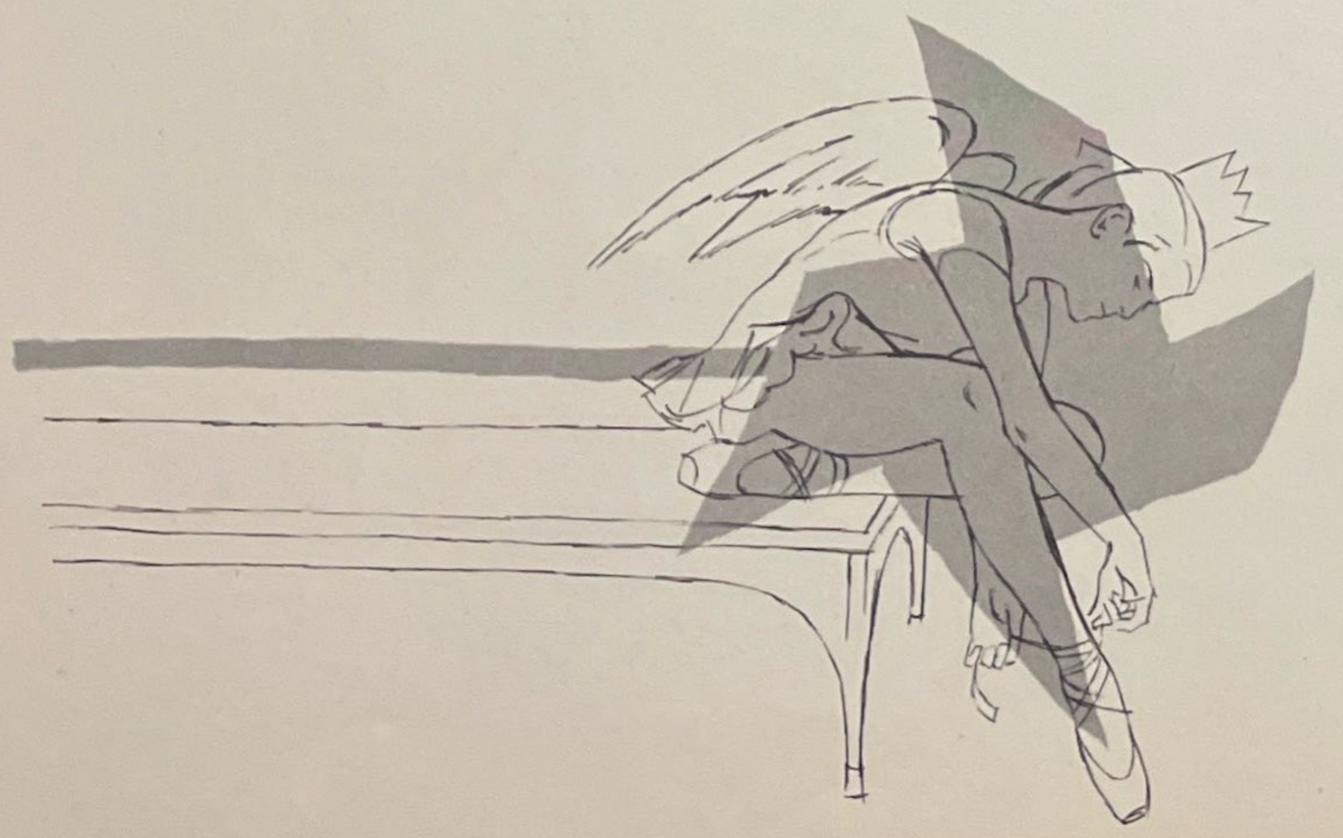
Figure in action

These four photos were made with strobe attachment to the camera, arresting the dancer's movements. The fluent rhythm of the dance was thereby broken into static poses never seen by the naked eye. It became a series of poses and was no longer a dance. Had I used a slower lens the photograph would show a blurred figure, much more convincing as a display of motion and more nearly what the naked eye would see. However, for me to translate this photo into pictorial terms for you, a blur would not be in order. Since most everyone is familiar with the formalized ballet steps, I felt more interest would be gained and more fun could be had if I discarded the dancing figure.

The following day I photographed many poses in my studio without thought of the dance. The four photos shown which are immediately above had the most possibilities. I chose the one of the girl tying on her slippers, feeling the pose lent itself to my demonstration. The compact figure said "spinning top" to me —not an upright spinning top without visible motion, but a top about to topple.

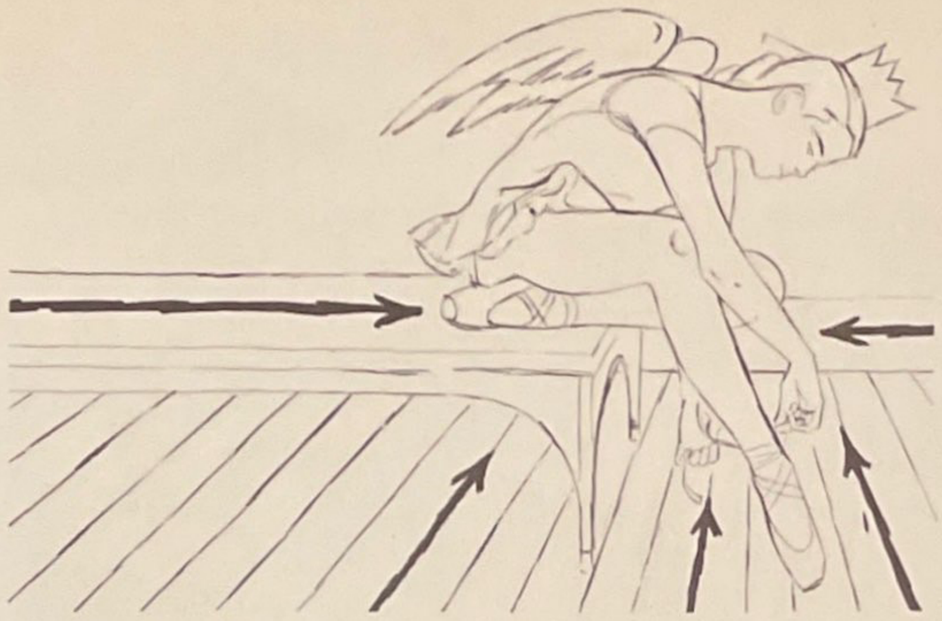


The square dimensions of the photo, plus the X formed by the bench supports, seemed to destroy the movement. Especially since X is familiar as the symbol for a railroad stop sign. Movement was added by extending the composition to the left, placing the bench in that area. This gives the viewer's eye a route to travel, setting off the figure like a rose at the end of a long stem.

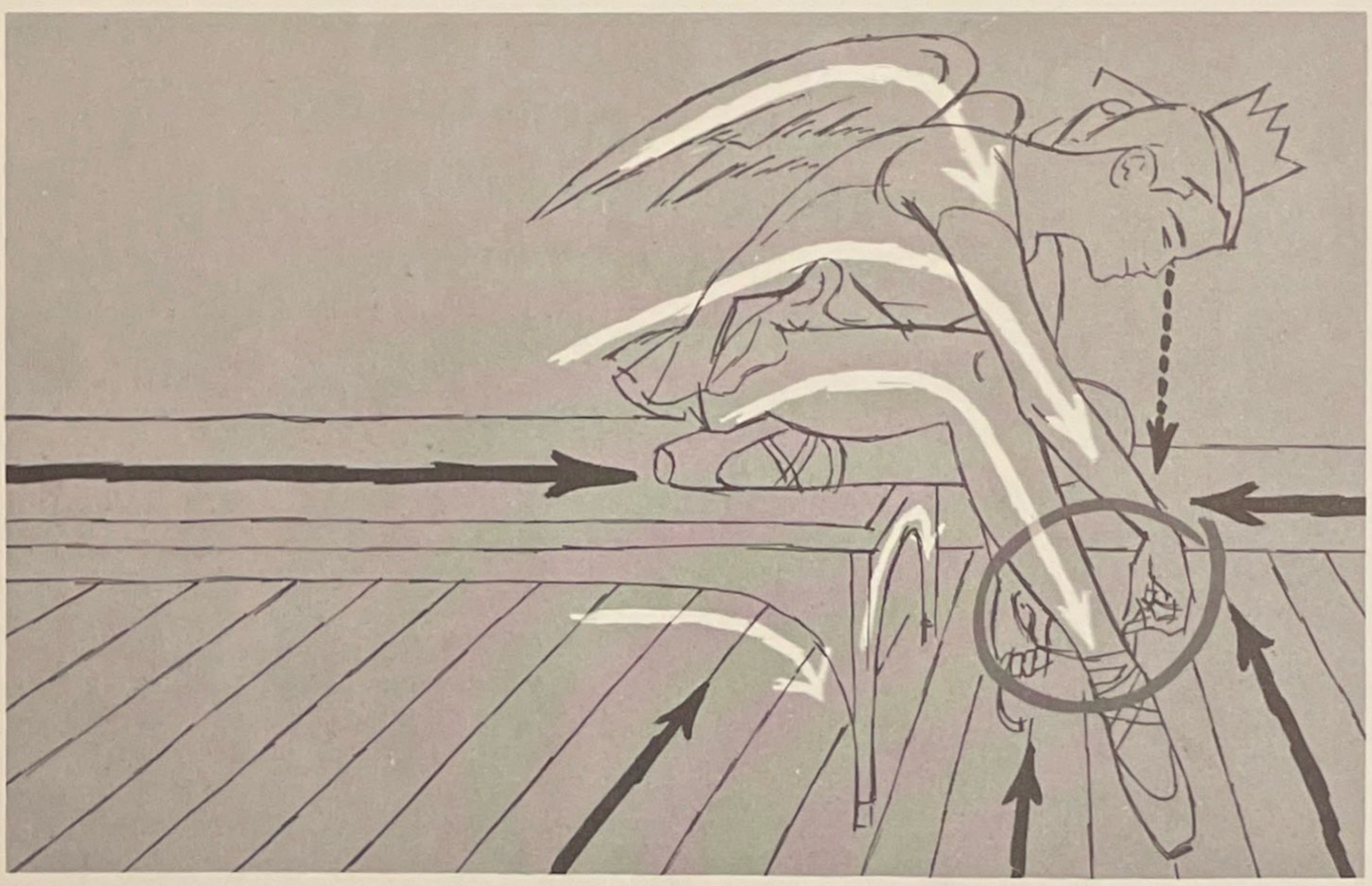


Then a pin wheel came to mind. At this time I added more to her costume, a bit of warm gaiety with restraint, departing from the photo, but adding interest and motion in doing so.

The viewer's eye becomes tired without a resting place, so I give it a destination, a focal point. The most motion is in the hands and since the eye follows the path of the dancer's eye to that area, it becomes the center of interest.



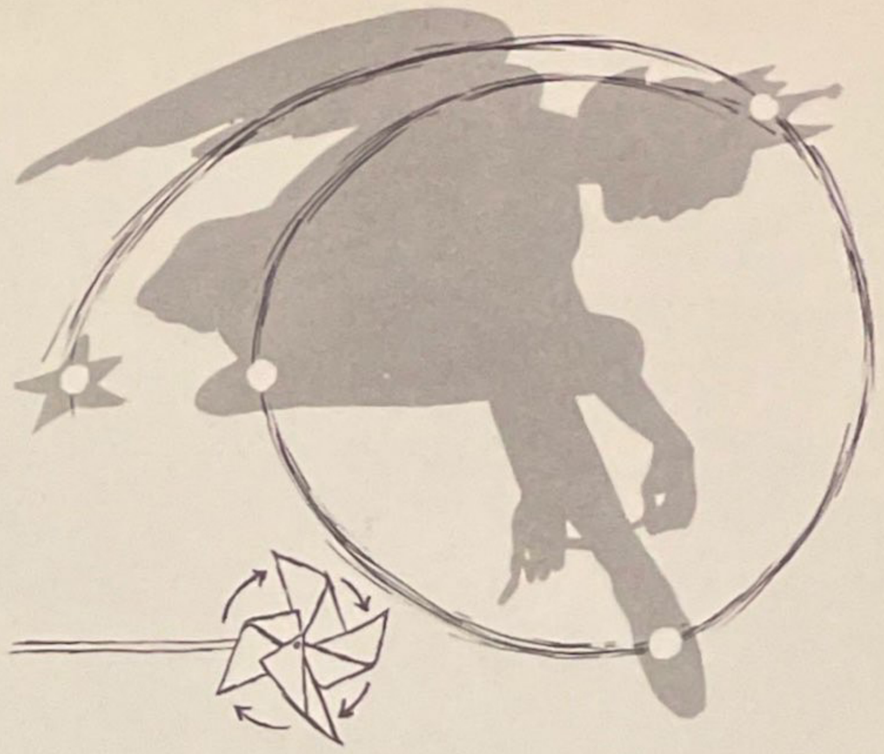
The background also must function to give motion to the subject. The brush strokes of the floor (at the same time they give an illusion of boards) converge behind the dancer. The only upright strokes appear at the center of interest.



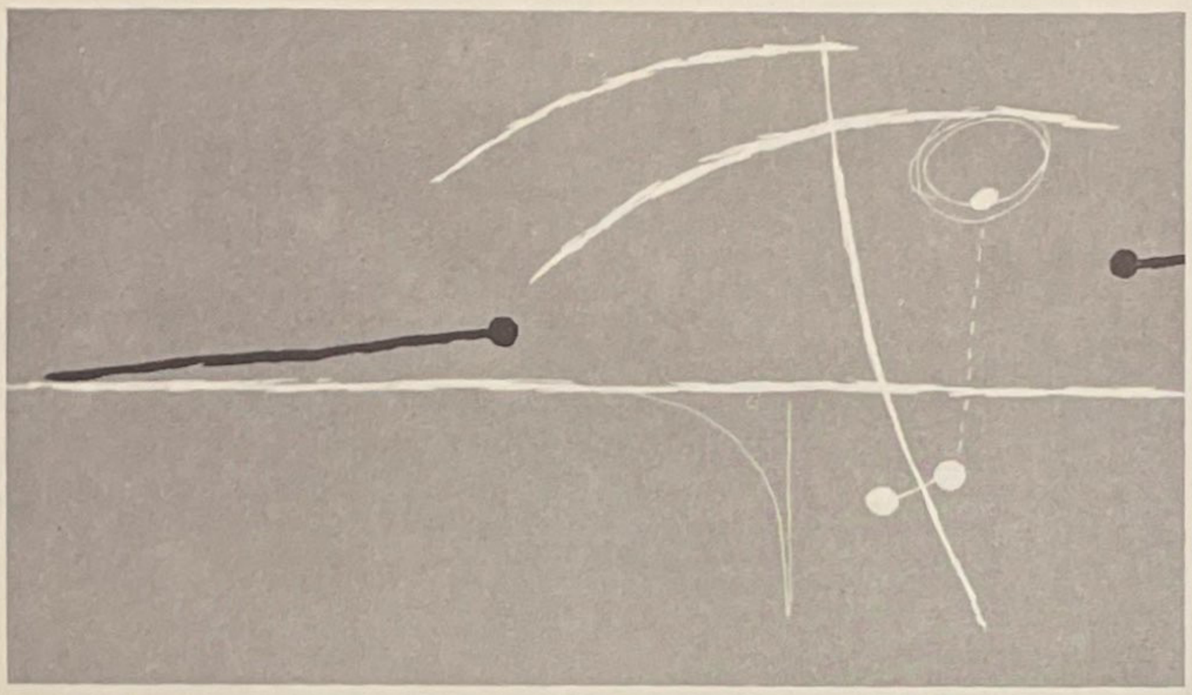
Now you see the combined motions of directional lines and how all these form eye-paths to the focal point.

This motion is carried into tone — the patterns, as if cut out into silhouettes, further complement the linear directions. To give more action to the hands and prominence to the focal point, I isolated her right hand and partly the left. This meant adding sleeves to her costume.

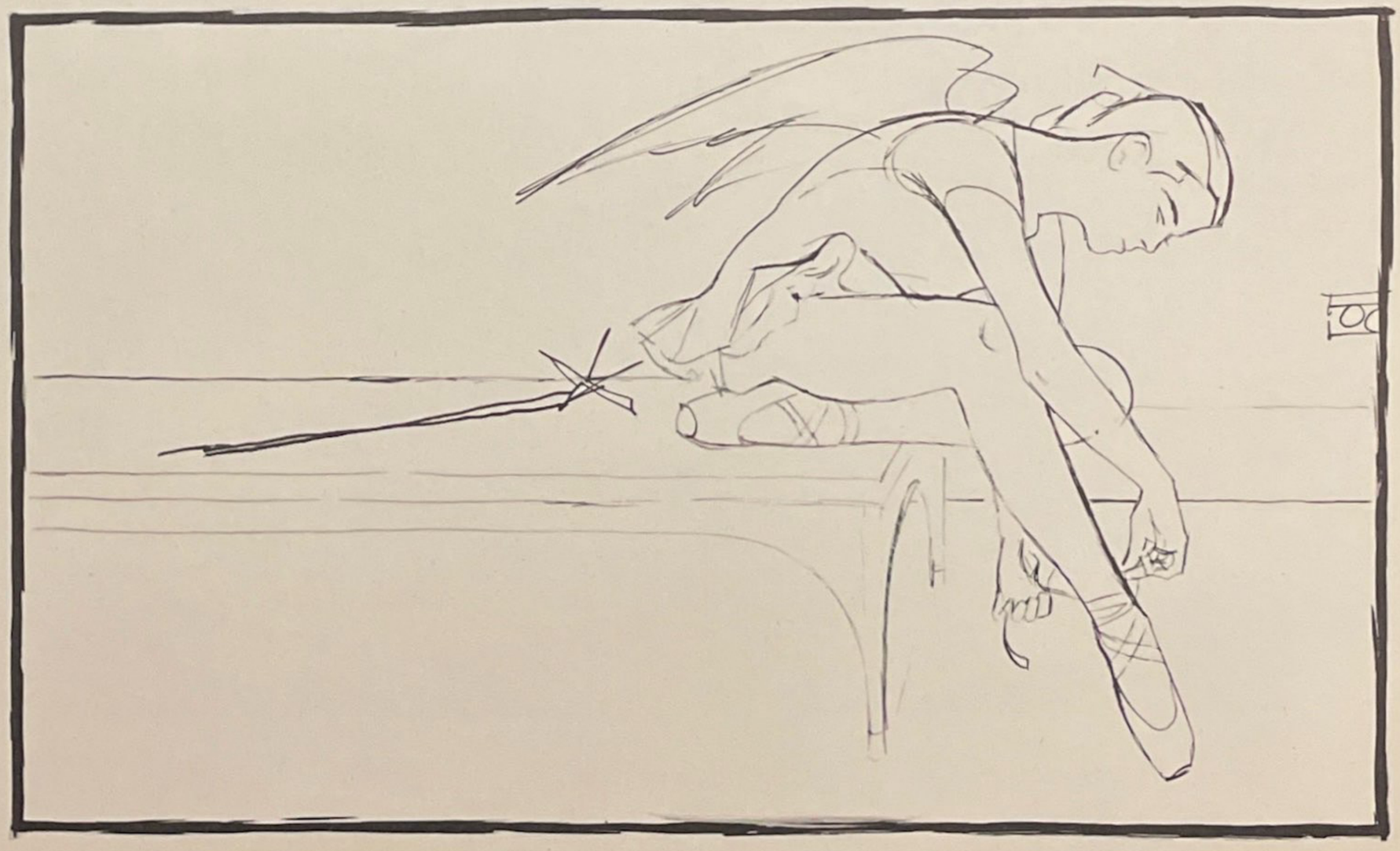
The added tones must not destroy the basic tones, this would disorganize the composition. Without organization of its parts any painting would disintegrate.



The pin wheel is set in motion by the colors used. The brightest color appears on the slippers and crown — a touch on the star makes it revolve. The rest of the colors in the sketch have less intensity.



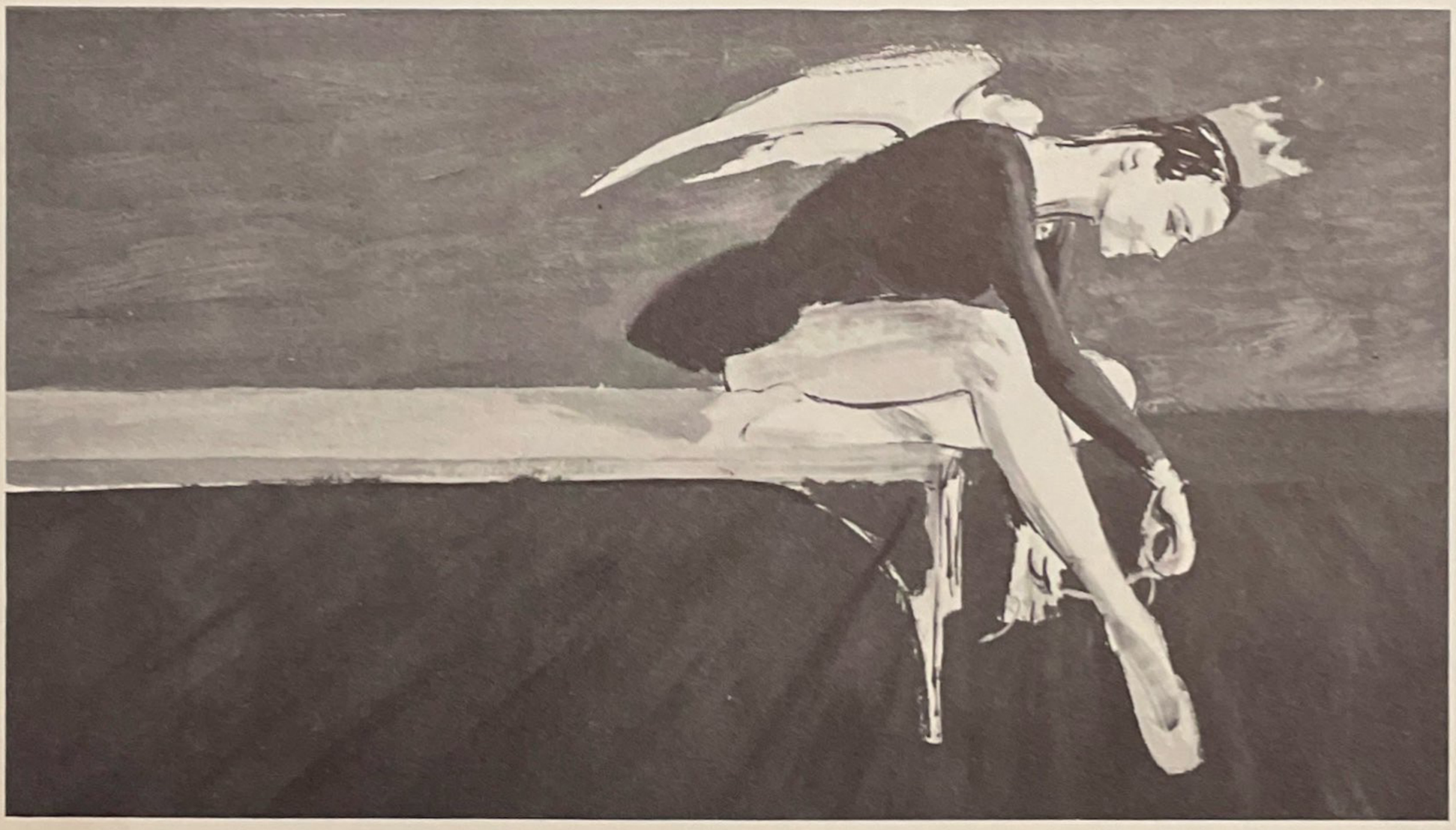
The electrical outlet was added on a line with the wand, helping to remove the placid horizontal lines of the bench and the baseboard. Additional motion resulted. I furthered the drive of her sleeve by a thrust from a wand into the cast shadow, hence to her costume and down to the focal point. The star and the electrical wall outlet are lesser focal points to keep the eye moving and prevent its traveling down the leg and out of the painting via the dancer's foot. This was done intuitively on the sketch and this diagram was made afterwards. (It would be fun to make this into an abstract painting.)



This is made from my preliminary sketch. It is now lightly sketched in pencil on tracing paper.

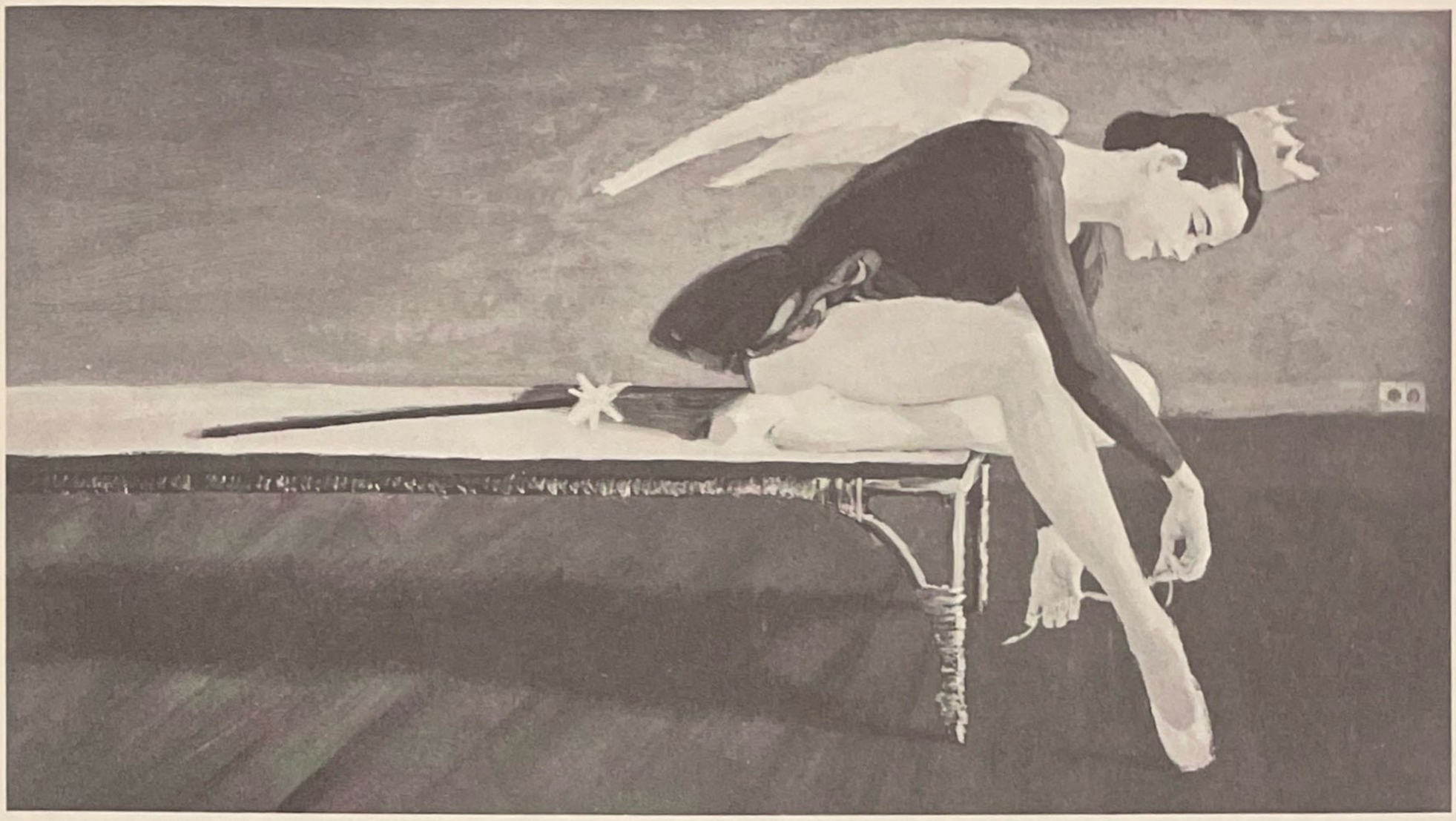
Figure in action

It is now very lightly traced onto the gesso panel. My colors are squeezed on a butcher tray palette, an old coffee can is filled with turpentine and I'm off. I do not adhere too closely to the traced lines, to do so would sacrifice the freedom of my brush which in turn must remain fluid and plastic. I try to feel the subject as a whole.



I wander here and yon with my brush, but refrain from destroying the hidden construction I planned in the beginning.

Figure in action



Oops! I lowered the electrical outlet experimentally and as you can see it doesn't look as good. The rendering has become too tight for a figure in motion. The bench is getting too fancy. I've wandered from the original plan.

Using a larger brush I paint broadly to pull it into shape. This is the finished painting.

In this detail, reproduced the same size as the original painting, notice the consistently broad, direct brushwork. The modeling is kept very simple, with lights and shadows forming definite, separate shapes. In painting the flesh, the edges are generally soft. The direction of the brush strokes is important. They tend to follow the form or the plane they are creating. The strokes in the floor help lead the eye to the figure. The hair has been brushed in very broadly, with no attempt to paint individual hairs. This is consistent with the handling of the entire picture.

OROZCO. Embrace

The emotion of parted souls upon reunion is expressed by these embracing women. They have rushed together; the force and direction of the motion continues in their reaching arms. Gaunt fingers of light push the figures closer together. The moving drapery pattern reflects the excitement of the experience.

Paris, Chambre des Députés

DELACROIX. Hesiod and the Muse

The sleeping figure of Hesiod is patterned out of darkness with a few telling strokes of light. Above him the floating figure of his Muse hangs seemingly suspended. Even though she is painted three-dimensionally, the animation of her pose and the concentration of light upon her figure make it is easy for us to believe that she is capable of hovering in the air.

Collection Ludwig Charell

TOULOUSE-LAUTREC. La Goulue and Valentin

Every shape and line in this drawing is evocative of the dance. The artist has exaggerated forms and movement almost to the point of caricature in order to convey the gesture of the action as forcefully as possible.

PIETER BRUEGEL THE ELDER
The Wedding Dance
The Detroit Institute of Arts

In his rollicking, *The Wedding Dance*, Pieter Bruegel conveyed movement both by skillful drawing of individual figures and by color composition. Using a slightly elevated view, he was able to stress the changing diagonal axes of the foreshortened dancers and show the shift of weight from one foot to another. A continuous spiralling movement links figures in a chain through swirling garments in sharply contrasting local colors: a dark sleeve reaches back against a light apron; a light arm extends across a dark tunic. The animation of alternate lights and darks, warms and cools, expresses the lively tempo of the dance.

Fogg Art Museum, Harvard University
(Paul J. Sachs Collection)

DEGAS. A Young Woman In Street Dress

In 1872, when this drawing was made, styles depended for effect on voluminous drapery folds. The young woman's body is completely hidden within this massive covering; but we still sense the solidity of the figure because it supports the drapery convincingly at the shoulders and hips. Simple pipe folds predominate,

RAPHAEL. Study for Draped Man

This imposing figure gains added dignity through the magnificent drapery design. Two points of suspension at the hips create the huge diaper fold, which breaks down into inert folds around the feet. At the extreme right there are several pipe folds.

JORDAENS. The Moorish King

Here a rather heavy fabric is being blown against the figure in such a way as to reveal the solid form underneath. The drapery pattern is a rather complicated combination of spiral, pipe, zigzag and drop folds.

RAPHAEL. Study of Kneeling Woman

Even a master like Raphael found it advantageous to work out drapery designs carefully and functionally. The folds here serve to create an interesting pattern while revealing the basic forms of the body underneath. A half-lock fold falls across the hip; spiral, drop, and pipe folds define the right leg; and a large diaper fold descends between the legs to zigzag and inert folds below.

FAMOUS ARTISTS PAINTING COURSE

Student Work

Lesson 8 -- The Figure in Action

ASSIGNMENT -- To Mail to the School for Criticism:

Your assignment for this lesson will be a painting of the figure in action. Three possible subjects are listed below. Choose one of these subjects and develop it into an interesting painting, making such variations in the theme as you feel necessary for personal expression.

8-A. A painting of a dancer that expresses the graceful movement and flowing rhythm of the dance.

8-B. A painting of a stevedore lifting a crate. Here you should concentrate on expressing the weight of the burden and the strength of the man.

8-C. A young woman kneeling to pick a flower -- an expression of quiet restrained movement.

Before beginning to plan this painting, read over once more the introductory material to the lesson -- Pages 3 and 4. It is extremely important for you to understand the difference between the figure in motion -- in nature -- and motion in the figure, as you create it compositionally. You may portray a pose of violent physical action, but unless the lines and shapes throughout the composition echo and reinforce this statement of action, there will be no motion in the eye of the observer -- and therefore no motion in the painting.

Begin the composition by organizing the pose itself, creating patterns of lines and shapes that carry the eye through and around the figure in the kind of rhythm you want to communicate. If you are attempting to portray violent action, the eye should be carried through the figure in violent patterns rather than quiet undulating lines. If you want to give the impression of repose in the figure, violent rhythms are obviously out of place.

The same kind of planning should be extended to every other element in the painting. A scene of violence will be more violent if it is backed up by strong contrasts of values and textures, dramatic contrasts of colors, exaggerated lighting, appropriate brush work. A calm scene conveys its mood more convincingly through just the opposite handling.

Of course the artist must handle all his painting devices with taste and discrimination. A violent pose combined with violent contrasts in colors, values, lighting, textures, brush work, etc., could hardly escape being melodramatic and "stagey" in effect. Study the painting by El Greco facing Page 3. Here the compositional pattern is violent, and there are dramatic contrasts in the lighting. But the color is subtle and subdued, and the setting is deliberately kept as simple as possible. This illustrates a very important principle. Forms, colors, textures, lighting, brush work, etc., are all like the actors in a play. In any given painting, only two or three elements can be given "starring" roles; the others must serve as supporting members of the cast with relatively minor significance. Otherwise the total impact will be one of confusion.

Remember that movement in the painting is not restricted to the movement of lines and shapes. Distribution of colors and accents will draw the eye from one place to another over the surface of the canvas, and the rhythm with

(Over)

which the eye moves will determine the kind of life the painting has. If the abstract elements of the painting are planned for movement, the impression it leaves with the observer will be one of animation and interest, even though the figure itself is shown in a passive pose.

* * * *

The figure should dominate the picture, and be shown in a suitable setting.
The painting should be in full color.
Work in any medium (except pastel), on a surface suitable to the medium.
Make the painting 16 x 20 inches in size.
Be sure the painting is thoroughly dry before you mail it in.
Do not mat or frame any picture you send us for criticism.
If you use stretched canvas remove the stretchers before placing it in the special mailing container.
On the back of your picture, be sure to letter:
Your name
Student number
Address
Assignment number
Mail the painting to

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